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ABSTRACT

This paper documents the social changes that have taken place in the American family during the last quarter century and suggests that these changes have created the need for new directions in both public policy and developmental research. The general trend reveals progressive fragmentation and isolation of the family in its child rearing role, as evidenced by more working mothers, more single-parent families, a decline in academic performance, and a rise in the rates of child homicide, suicide, drug use, and juvenile delinquency. It appears that the critical factor in these trends is not race, but the conditions under which the family lives. Changes are occurring more rapidly among younger families with younger children: Cross-sectional differences in the well-being of families are strongly linked with economic status, but the longitudinal trends seem to be a function of increasing urbanization. It appears that the destructive effect of these changes derives from the progressive segregation by age in American society, resulting in the isolation of children from those responsible for their care. The key to correcting these problems is seen in the development of support systems for families and in research which studies development in context. (Author/JMB)

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The Challenge of Social Change to Public Policy and Developmental Research*

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ABSTRACT

The principal ~~feature~~ thesis of the paper is that social change in the last quarter century require new directions both for public policy and developmental research. In support of the thesis, evidence is adduced to document profound changes, over the past quarter century, in the institution bearing primary responsibility for the care and development of the Nation's children-- the American family. The general trend reveals progressive fragmentation and isolation of the family in its child rearing role. As many more mothers have gone to work (now over half of those with school-age children, one-third with children under six, and 30% with infants under three; two-thirds of all those mothers are working full-time), the number of adults left in the home who might care for the child has been decreasing to a national average of two. Chief among the departing adults has been one of the parents, usually the father, so that today one out of every six children under eighteen is living in a single-parent family. This is often not a temporary state, since, on a national scale, the remarriage rate, especially for women, is substantially lower than the rate of divorce in families involving children, and this differential has been increasing over time. A significant component in the growth of single-parent families has been a sharp rise in the number of unwed mothers; more young women are postponing the age of marriage, but some of them are having children nevertheless.

All of these changes are occurring more rapidly among younger families with younger children, and increase with the degree of economic deprivation and ~~industrialization~~ urbanization, reaching their maximum among low income families living in the central core of our largest cities. But the general trend applies to all strata of the society. Middle class families, in cities, suburbia, and non-urban areas, are changing in similar ways. Specifically, in terms of such characteristics as the proportion of working mothers, number of adults in the home, single-parent families, or children born out of wedlock, the middle class family of today increasingly resembles the low income family of the early 1960's.

Although levels of labor force participation, single-parenthood, and other related variables are substantially higher for Blacks than for Whites, those families residing in similar economic and social settings show similar rates of change. The critical factor, therefore, is not race, but the conditions under which the family lives.

Concomitant and consistent with changes in structure and position of the family are changes in indices reflecting the well-being and development of children. Youngsters growing up in low income families are at especially high risk of damage physically, intellectually, emotionally, and socially. Evidence is also cited for disturbing secular trends indicated by declining levels of academic performance and rising rates of child homicide, suicide, drug use and juvenile delinquency.

While cross-sectional differences in the well-being of families and children are strongly linked with economic status, the longitudinal trends appear to be a function of more complex social changes associated with increasing urbanization.

*This paper was prepared for presentation at the President's Symposium "Child Development and Public Policy" at the annual meeting of the Society for Research in Child Development, Denver, April 12, 1975.

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It is suggested that the destructive effect of these changes derives from the progressive segregation by age in American society, resulting in the isolation of children and those responsible for their care. The key to corrective policy and practice is seen in the development of support systems for families, not only economically, but also socially, through the involvement of all segments of society in mutually rewarding activities for and, especially, with children and those primarily responsible for their well-being and development.

In the sphere of development research, social change focuses on the scientific importance of studying development in context. It is argued that the strategy of choice for such research is not descriptive analysis of the status quo, as exemplified in this paper, but what may be called [redacted] experimental human ecology, an approach involving systematic efforts to alter existing environments in controlled experimental situations. Examples of such research problems and designs, both existing and potential, are presented as illustrations of work currently being done, [redacted] and conducted in the Program on the Ecology of Human Development sponsored by the Foundation for Child Development. Investigators having ideas for studies along similar lines are encouraged to submit them for consideration by the Program.

Preliminary Draft
April 1975

The Challenge of Social Change to Public Policy and Developmental Research*

Urie Bronfenbrenner
Cornell University

I Introduction

At our last meeting, also at a President's Symposium, I presented a paper entitled "Developmental Research, Public Policy, and the Ecology of Childhood." In that paper, since published in Child Development[1], I proposed a reorientation to theory and research in human development in which considerations of public policy would play a central role. I was arguing not that public policy needed our science, but the converse proposition that our science needed public policy. Specifically, I contended that for our field to achieve theoretical maturity, methodological rigor, and, above all, comprehensive understanding of the nature and scope of developmental processes, it was "essential" that we, as researchers, address the scientific questions underlying issues of public policy relating to children. Why "essential"? Because these issues "focus on the impact on the child, both direct and indirect, of the enduring environment in which he lives, or might live if social policies and practices were altered."

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*This paper was prepared for presentation at the President's Symposium "Child Development and Public Policy" at the annual meeting of the Society for Research in Child Development, Denver, April 12, 1975. I wish to express appreciation to the Foundation for Child Development for support in the development of the work presented in this paper and of the program of research grants in which the research recommendations are now being implemented. I am especially indebted to the following colleagues for their creative assistance in this endeavor: the members of the Foundation staff particularly Orville Brim, Heidi Segal, Jane Dustan, and their predecessors Robert Slater and Barbara Jacquette; the devoted consultants to the FCD Program, Sarane Boocock, Michael Cole, Glen Elder, William Kessen, Melvin Kohn, Eleanor Maccoby, and Sheldon White; and my hard working administrative aide and research assistants, Joyce Brainard, Susan Turner, Lynn Mandelbaum, and Carol Williams. I am also grateful to many colleagues and students whose suggestions and criticisms have been a major stimulus to my own thinking and some of whose ideas I have probably assimilated as my own, among them are the following: David Goslin, Kurt Lüscher, Edward Devereux, Maureen Mahoney, James Garbarino, Eduardo Almeida, David Olds, Moncrieff Cochran, Julius Richmond, John Condry, John Hill, Harold Watts, and David Knapp. Thanks are due as well to cooperative colleagues in the Bureau of the Census and the National Center for Health Statistics, in particular Howard Hayghe, Robert Heuser, Arthur Norton, and Alexander Plateris.

[1] Child Development, 1974, 45, 1-5.

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I then proceeded to describe the kinds of questions I had been asked as an allegedly "expert witness", by policymakers both in the public and private sector. As I recounted to you at our last meeting:

> There was a period, a few years ago, when I found myself frequently in a position that turned out to be excruciatingly uncomfortable. For a while, policymakers actually did look to me for truth and, what is more frightening, for wisdom. What I found was that, when they asked for truth, there was little I could tell them, at least in answer to the questions they were asking. I felt much better when they asked me for wisdom. Here I had quite a bit to say. But they interrupted me with an unfair question. They asked: "What's your evidence?" Something happened that is rare in my experience: I had nothing to say.

My inability to answer questions which clearly lay within the sphere of our specialty prompted me to undertake a reappraisal of the research models that prevail in our field, in particular the kinds of problems and parameters they encompass, or, more importantly, that they exclude, and the relationships between these parameters that are allowed for or, again more importantly, are ruled out of consideration by default. My analysis brought me to the conclusion that the further development of our discipline required us to construct and apply more comprehensive conceptual models that would permit the systematic investigation of development <u>in context</u>. I then proposed that a fruitful point of departure for this endeavor would be an attempt to answer some of the scientific questions underlying contemporary public policy issues affecting children and those responsible for their care. I argued that such an effort would result in the definition of new kinds of research questions requiring new kinds of research designs that would lead to fruitful scientific findings. Finally, I announced that I was so

impressed with my own arguments that I was not only recommending a course of action to others, but was committing myself to work along this line for the next several years.

Today I am presenting what is in effect an early, and perhaps premature, progress report. I did not like it when policymakers asked me questions in my field to which I did not know the answer, or perhaps I simply could not tolerate a situation in which I was left with nothing to say. In any event, since that time, I have undertaken the task of finding answers to some of the questions asked by the policymakers. Today I shall present to you, first, what I learned from my attempt to answer some of the questions that were addressed to me most frequently. They can be summarized as follows: "Is it true that the American family has been changing? If so, in what respects and with what effect on the children?"

Second, having provided you with an illustration of the substantive outcome of my attempts to explore ecological reality, I shall describe briefly a program of research generated by these efforts. It has been my good fortune to obtain some support for this program from the Foundation for Child Development. As you may know, this undertaking includes provision for funding small scale investigations that meet our criteria for systematic research on the ecology of human development. I hope many of you will be attracted by this prospect.

But first things first. I begin with a report on the changing American family.

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II The Changing American Family

The American family has been undergoing rapid and radical change. Today, in 1975, it is significantly different from what it was only a quarter of a century ago. In documenting the evidence, I shall begin with aspects that are already familiar, and then proceed to other developments that are less well known. I will then show how these various trends combine and converge in an overall pattern that is far more consequential than any of its components.

Since my aim to is identify trends for American society as a whole, the primary sources of almost all the data I shall be presenting are government statistics, principally the Current Population Reports published by the Bureau of the Census, the Special Labor Force Reports issued by the Department of Labor, and the Vital and Health Statistics Reports prepared by the National Center of Health Statistics. These data are typically provided on an annual basis. What I have done is to collate and graph them in order to illuminate the secular trends.

1. More Working Mothers.

Our first and most familiar trend is the increase in working mothers. (Fig. 1) There are several points to be made about these data.

1) Once their children are old enough to go to school, the majority of American mothers now enter the labor force. As of March 1974, 51% of married women with children from 6 to 17 were engaged in or seeking work; in 1948, the rate was about half as high, 26%.

2) Since the early fifties, mothers of school age achildren have been more likely to work than married women without children.

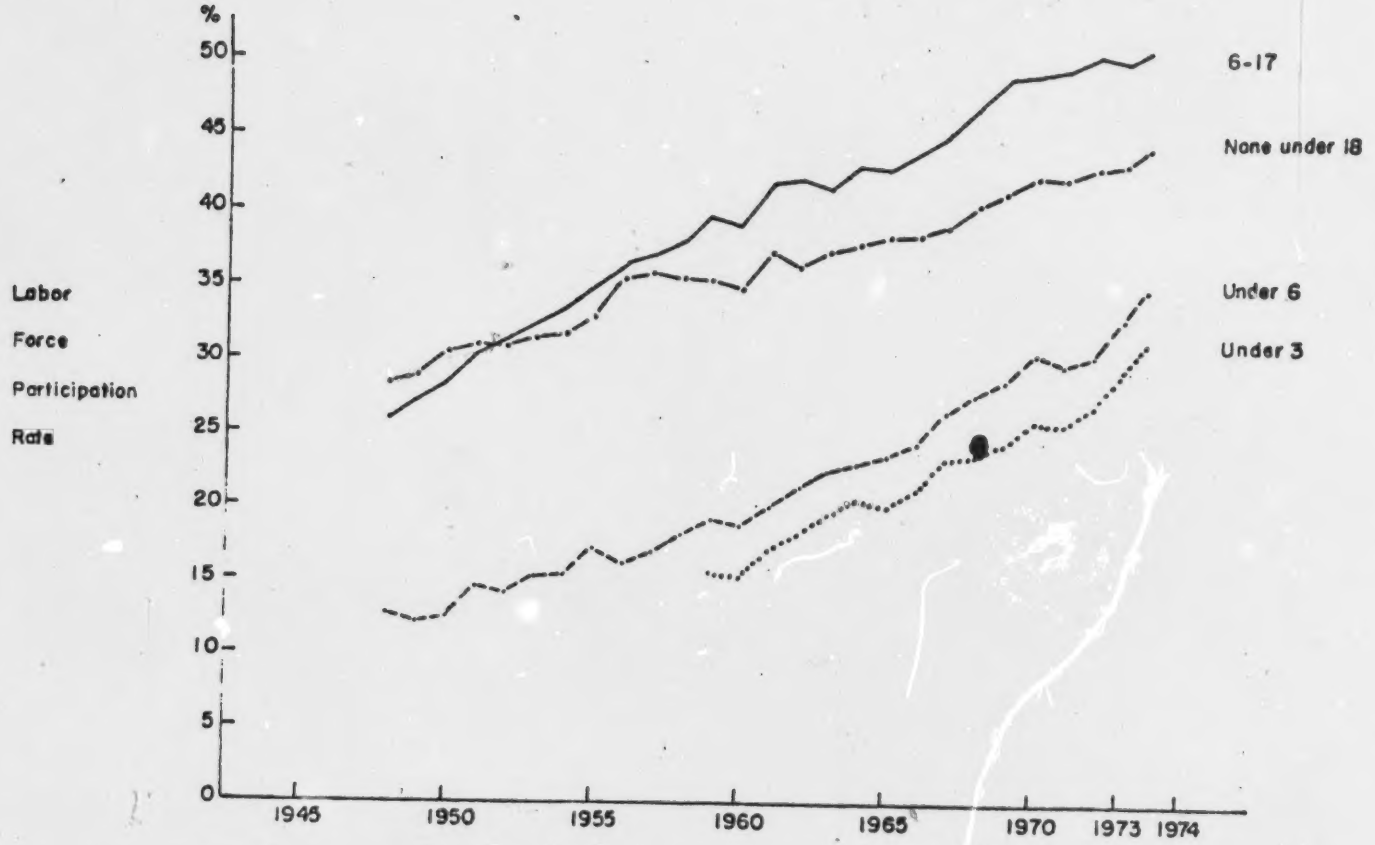

Figure 1. Labor Force Participation Rates for Married Women by Presence and Age of Children[1] 1948 - 1973

[1]Data through 1955 from Current Population Reports 1955, P-50, No.62, Table A; from 1956, Special Labor Force Reports 1959, No. 7, Table I and 1974, No. 164, Table 3.

3) The most recent and most rapid increase has been occurring for mothers of young children. One-third of all married women with children under six were in the labor force in 1974, three times as high as in 1948. Mothers of infants were not far behind; three out of ten married women with children under three were in the work force last year.

4) Whether their children were infants or teen-agers, the great majority (two-thirds) of the mothers who had jobs were working full time.

5) These figures apply only to families in which the husband was present. As we shall see, for the rapidly growing numbers of single-parent families, the proportions in the labor force are much higher.

2. Fewer Adults in the Home.

As more mothers have gone to work, the number of adults in the home who could care for the child has decreased. Whereas the number of children per family is now about the same today as it was twenty to thirty years ago, the number of adults in the household has dropped steadily to a 1974 average of two. This figure of course includes some households without children. Unfortunately, the Bureau of the Census does not publish a breakdown of the number of adults present in households containing children. A conservative approximation is obtainable, however, from the proportion of parents living with a relative as family head, usually a grandparent.[2]

[2]This proportion represents a minimum estimate since it does not include adult relatives present besides parents, when the parent rather than the relative is the family head. For example, a family with a mother-in-law living in would not be counted unless she was regarded as the family head, paid the rent, etc. The percentage was calculated from two sets of figures reported annually in the Current Population Reports (Series P-20) of the U.S. Census; (a) the number of families (defined as two or more related persons, including children living together) and (b) the number of subfamilies (a married couple of single parent with one or more children living with a relative who is the head of the family). Since 1968, information has been provided as to whether or not the relative was a grandparent. This was the case in a little over 80% of all instances.

As shown in Figure 2, over the past quarter century the percentage of such "extended" families has decreased appreciably. Although parents with children under six are more likely to be living with a relative than parents with older children (6-17), the decline over the years has been greatest for families with young children.

3. More Single-Parent Families.

The adult relatives who have been disappearing from families include the parents themselves. As shown in Figure 3, over a twenty-five year period, there has been a marked rise in the proportion of families with only one parent present, with the sharpest increase occurring during the past decade. According to the latest figures available, in 1974, one out of every six children under 18 years of age was living in a single-parent family.[3] This rate is almost double that for a quarter of a century ago.

With respect to change over time, the increase has been most rapid among families with children under six years of age. This percentage has doubled from 7% in 1948 to 15% in 1974. The proportions are almost as high for very young children; in 1974, one out of every eight infants under three (13%), was living in a single-parent family.

Further evidence of the progressive fragmentation of the American family appears when we apply our index of "extended families" to single-parent homes. The index shows a marked decline from 1948 to 1974, with the sharpest drop occurring for families with preschoolers. Today, almost 90% of all children with only one parent are living in independent families in which the single mother or father is also the family head.

[3] This figure includes a small proportion of single-parent families headed by fathers. This figure has remained relatively constant, around 1% since 1960.

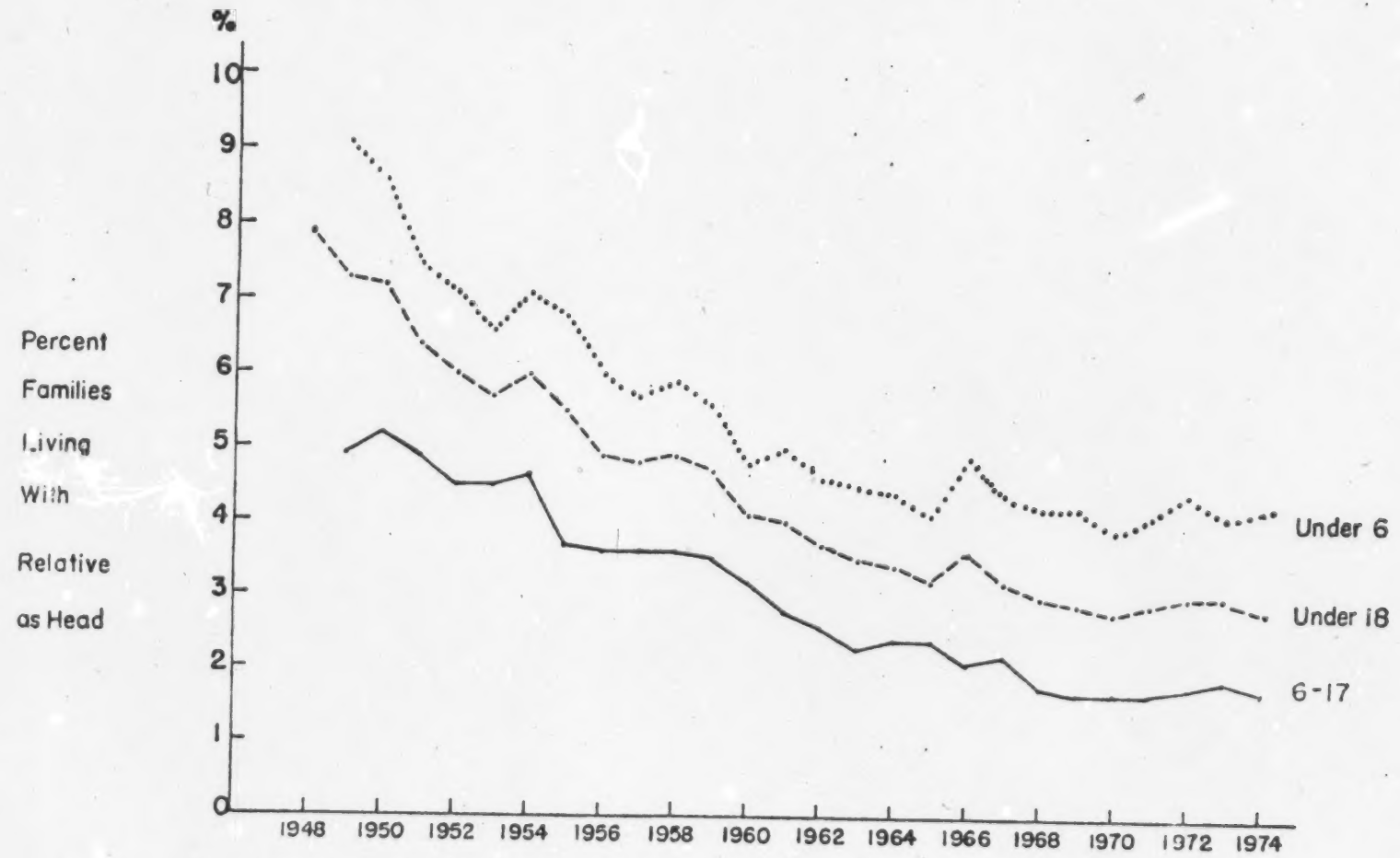

Figure 2. Parent Families Living with a Relative as Family Head as a Percentage of All Families with Children Under 18, Under 6, and 6 through 17 years of age.

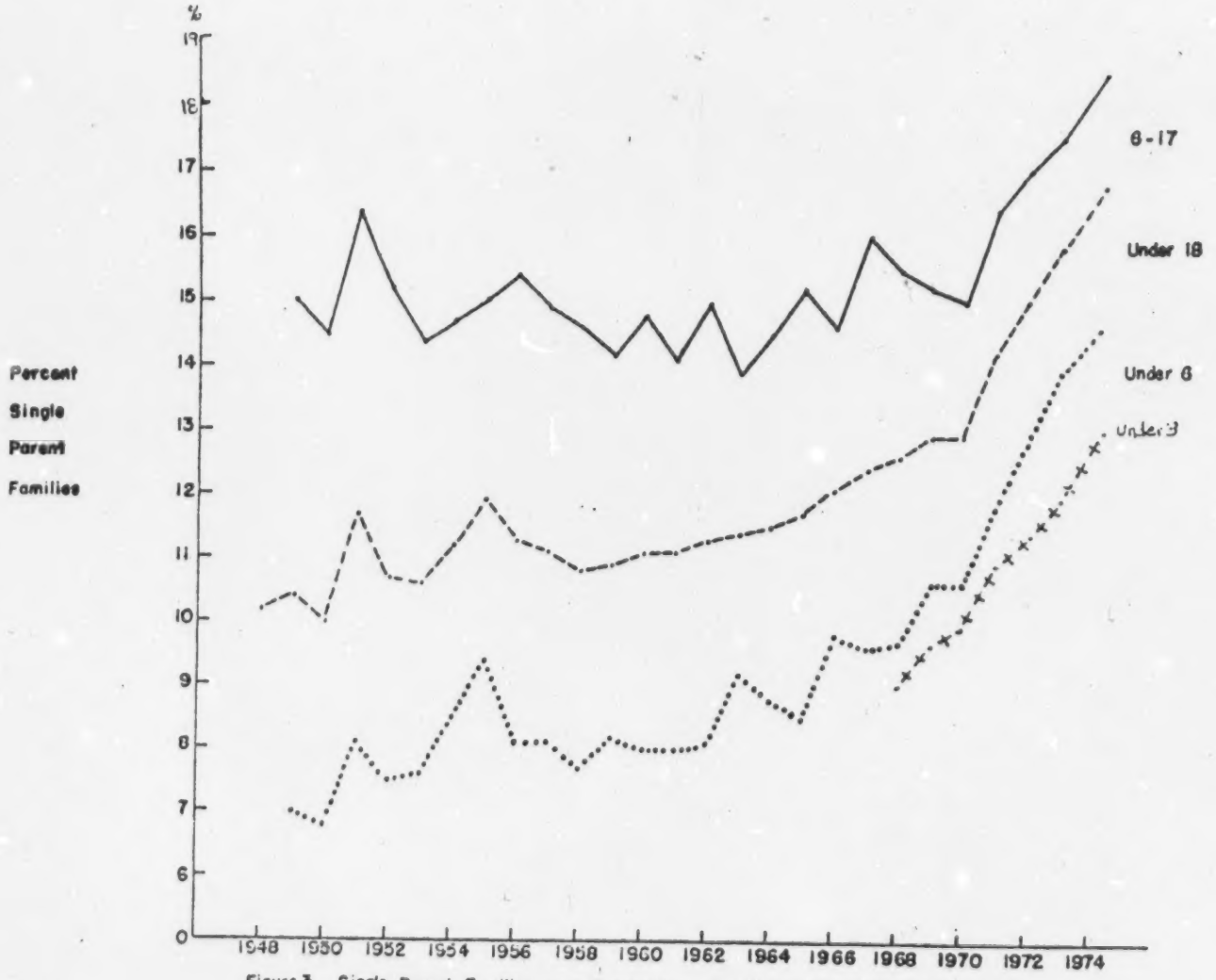

Figure 3. Single Parent Families as a Percentage of All Families with Children Under 18, Under 6, and 6 through 17 years of age

[1] Current Population Reports, Series P-20, 1948-1973

The majority of such parents are also working, 67% of mothers with school age children, 54% of those with youngsters under six. And, across the board, over 80% of those employed are working full time. Even among single-parent mothers with children under three, 45% are in the labor force, of whom 86% are working full time.

The comment is frequently made that such figures about one parent families are misleading, since single parenthood is usually a transitional state soon terminated through remarriage. While this may be true for some selected populations, it does not appear to obtain for the nation as a whole. Figure 4 depicts the relevant data. The solid line in the middle shows the divorce rate for all marriages, the cross-hatched curve indexes divorces involving children, and the broken line describes the remarriage rate. To permit comparability, all three rates were computed with the total population for the given year as a base. It is clear that the remarriage rate, while rising, lags far behind the divorce rate, especially where children are involved.

Moreover, there is good reason to believe that the remarriage rate shown on the graph is substantially higher than that which applies for divorced, widowed, or other persons who are single parents. The overwhelming majority of single parents, about 95% of them, are women. In 1971, the latest year for which the data are available, the female remarriage rate per 1000 divorced or widowed wives, was 37.3; the corresponding figure for men was 130.6, four times as high. Given this fact, it becomes obvious that the rate of remarriage for single-parent families involving children is considerably lower than the remarriage rate for both sexes, which is the statistic shown in the graph.

4. More Children of Unwed Mothers.

After divorce, the most rapidly growing category of single-parenthood, especially since 1970, involves unmarried mothers. In the vital statistics of the United States, illegitimate births are indexed by two measures: the illegitimacy ratio, computed as the ratio of illegitimate births per 1000 live babies born; and the illegitimacy rate, which is the number of illegitimate births per 1000 unmarried women aged 15-44 years. As revealed in Figure 5, the ratio has consistently been higher and risen far more rapidly than the rate. This pattern indicates not only that a growing proportion of unmarried women are having children, but that the percentage of single women among those of childbearing age is becoming ever larger. Consistent with this conclusion, recent U.S. census figures reveal an increasing trend for women to postpone the age of marriage. The rise in percent single is particularly strong for the age group under 25; and over 80% of all illegitimate children are being born to women in this age bracket.

Such findings suggest that the trends we have been documenting for the nation as a whole may be occurring at a faster rate in some segments of American society, and more slowly, or perhaps not at all, in others. We turn next to an examination of this issue.

III Which Families Are Changing?

Which Mothers Work? Upon analyzing available data for an answer to this question, we discover the following:

1. With age of child constant, it is the younger mother, particularly one under 25 years of age, who is most likely to enter the labor force. This trend has been increasing in recent years particularly for families with very young children (i.e., infants under 3).

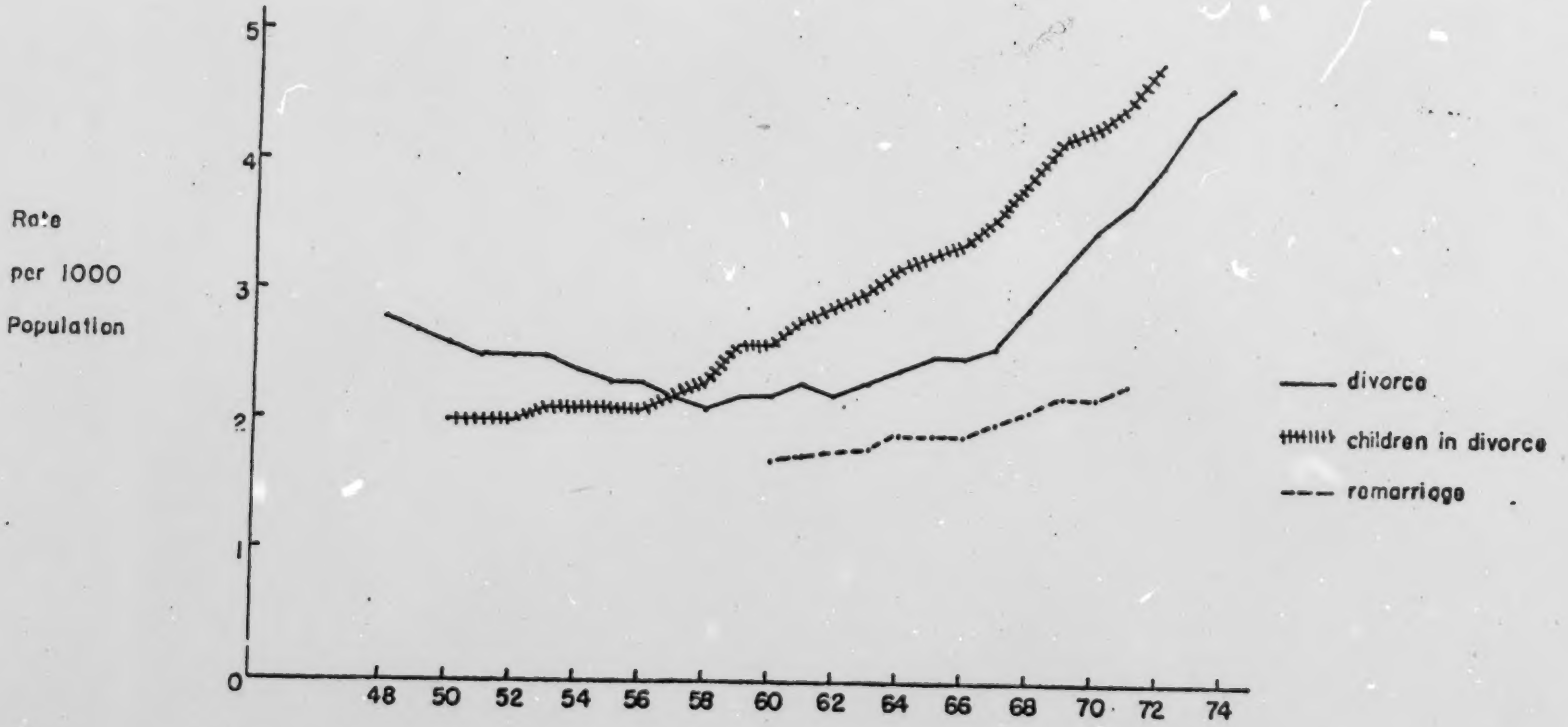

Figure 4. Rates of Divorce, Number of Children in Divorce, and Remarriage

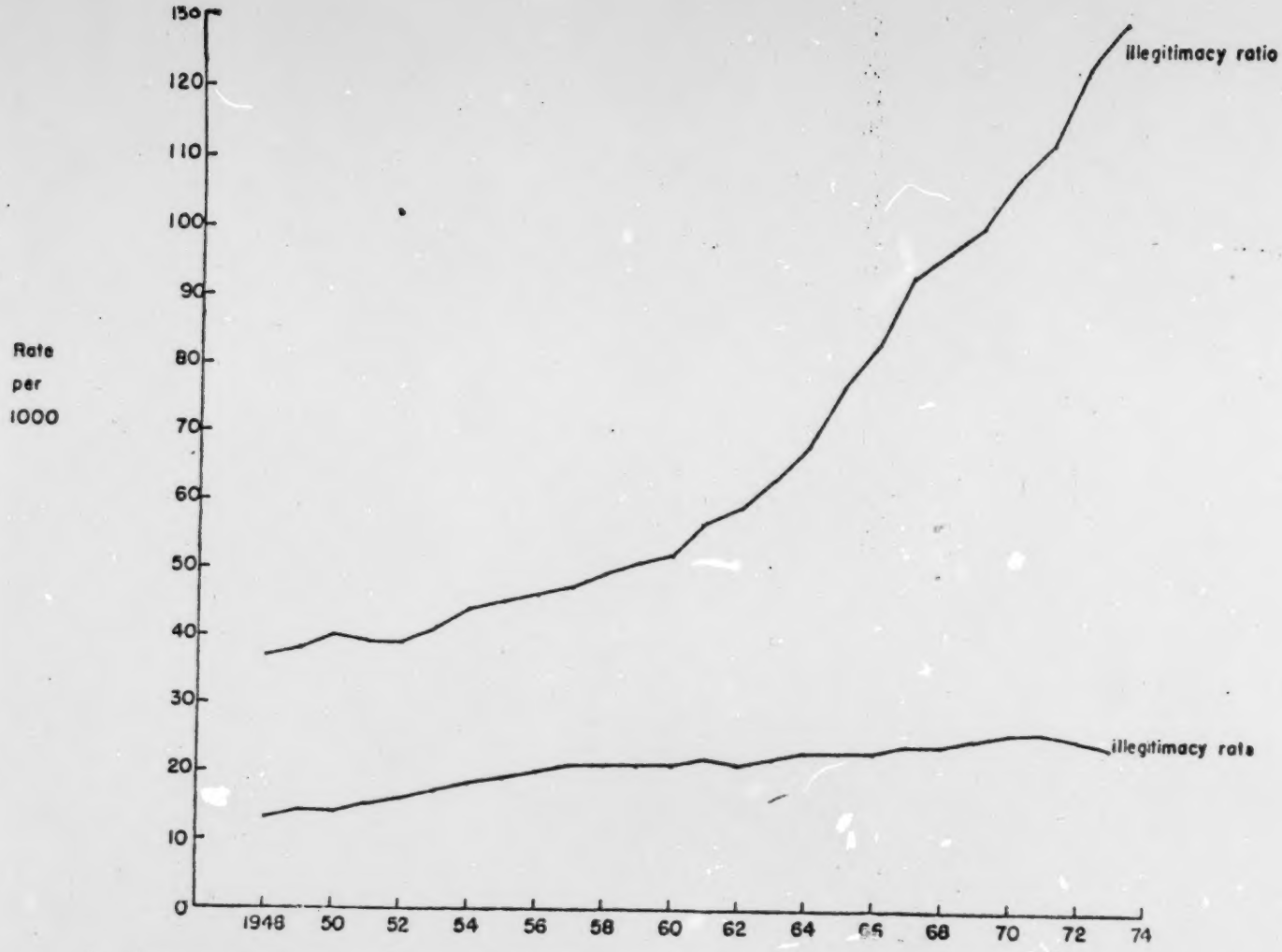

Figure 5. Illegitimate Births per 1000 Live Births (Ratio) and per 1000 Unmarried Women (Rate) 1948 - 1972

2. One reason why younger mothers are more likely to enter the labor force is to supplement the relatively low earnings of a husband just beginning his career. In general, it is in families in which the husbands have incomes below $5000 (which is now close to the poverty line for a family of four) that the wives are most likely to be working. And for families in this bottom income bracket, almost half the mothers are under 25. All of these mothers, including the youngest ones with the youngest children, are working because they have to.

3. But not all the mothers whose families need the added income are working. The limiting factor is amount of schooling. It is only mothers with at least a high school education who are more likely to work when the husband has a low income. Since, below the poverty line, the overwhelming majority (68%) of family heads have not completed high school, this means that the families who need it most are least able to obtain the added income that a working mother can contribute.

4. In terms of change over time, the most rapid increase in labor force participation has occurred for mothers in middle and high income families. To state the trend in somewhat provocative terms, mothers from middle income families are now entering the work force at a higher rate than married women from low income families did in the early 1960's.

But the highest labor force participation rates of all are to be found not among mothers from intact families, on whom we have concentrated so far, but as we have already noted, among mothers who are single parents. Who are these single-parent families, and where are they most likely to be found?

Who and Where Are Single-Parent Families? As in the case of working mothers, single parenthood is most common and is growing most rapidly among the younger generation. Figure 6 shows the increase, over the past six years, in the pro-

portion of one-parent families with children under six classified by age of head. By last year, almost one out of four parents under twenty-five heading a family was without a spouse.

The association with income is even more marked. Figure 7 shows the rise, between 1968 and 1974, in female-headed families for seven successive income brackets ranging from under $4000 per year to $15,000 or over. As we can see from the diagram, single-parent families are much more likely to occur and increase over time in the lower income brackets. Among families with incomes under $4000, the overwhelming majority, 67%, now contain only one parent. This figure represents a marked increase from 42% only six years before. In sharp contrast, among families with incomes over $15,000, the proportion has remained consistently below 2%. Further analysis reveals that single-parenthood is especially common for young families in the low income brackets. For example, among family heads under 25 with earnings under $4000, the proportion of single parents was 71% for those with all children under 6, and 86% with all children of school age. The more rapid increases over the past few years, however, tended to occur among older low income families, who are beginning to catch up. It would appear that the disruptive processes first struck the younger families among the poor, and are now affecting the older generation as well.

But a word of caution is in order. It is important to recognize what might be called a pseudo-artifact, pseudo because there is nothing spurious in what appears in the diagram, but the pattern is susceptible to more than one possible interpretation. For example, though the percentage for the highest income group is very low, it would be a mistake to conclude that a well-to-do intact family is at low risk of disruption, for there is more than one explanation for the falling fencepost we see in the figure. The interpretation that most readily

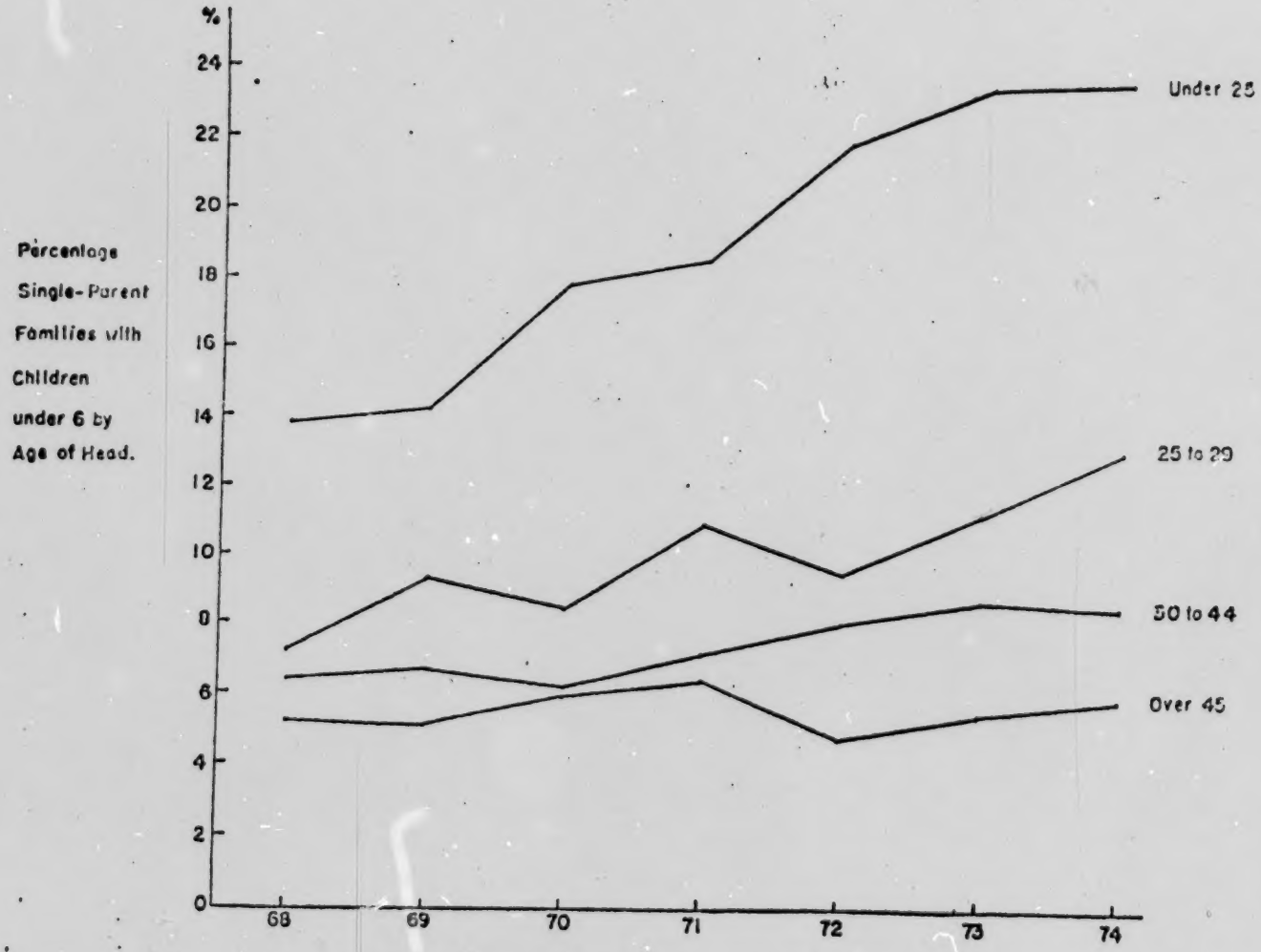

Figure 6. Percentage of Single Parent Family Heads with Children under 6 by Age of Head.

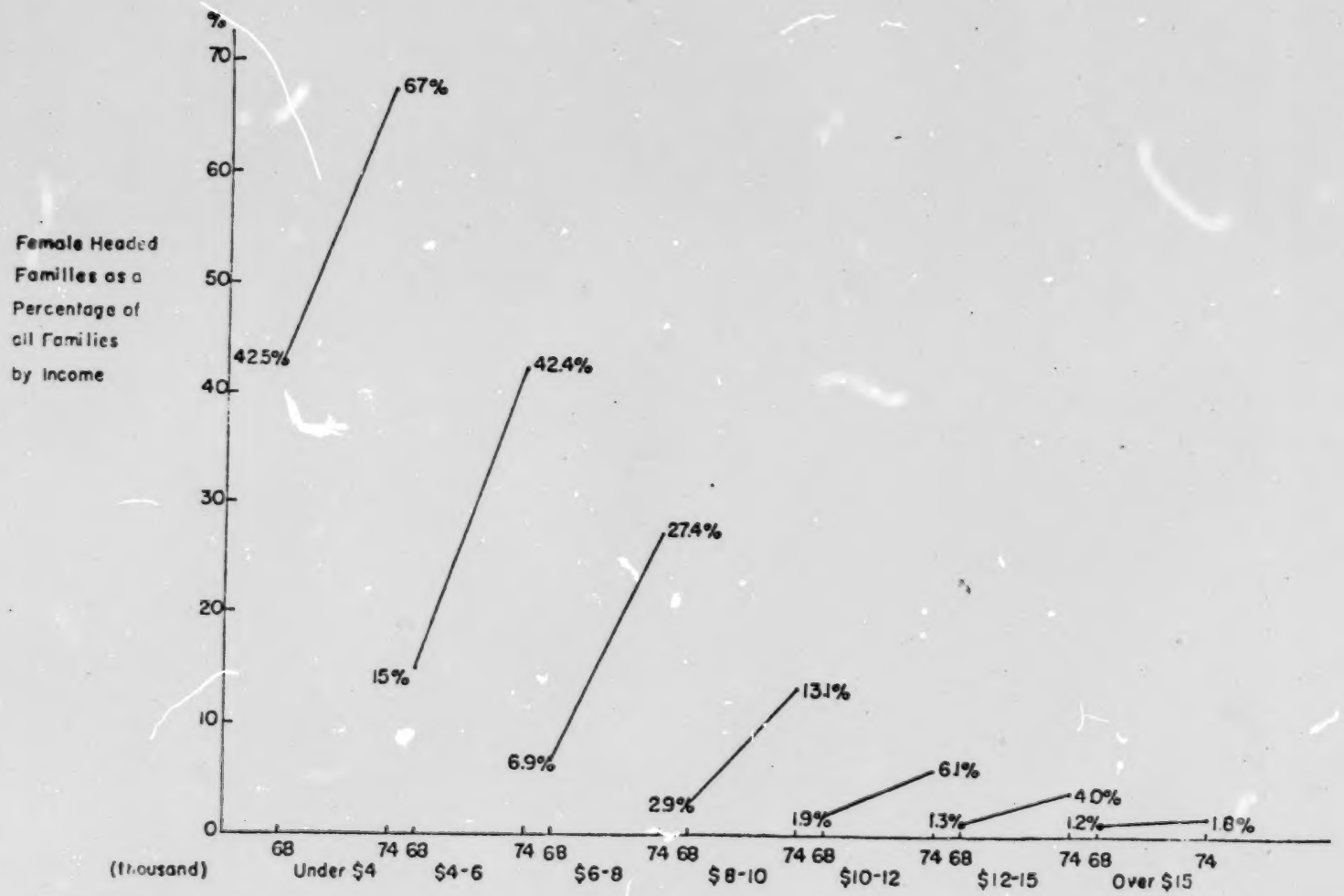

Figure 7. Female Headed Families as a Percentage of All Family Heads Under 65 with Children under 18 by Income in Previous Year. 1968-1974

comes to mind is that families with children are more likely to split up when they are under financial strain. But the causal chain could also run the other way. The break up of the family could result in a lower income for the new, single-parent head, who, in the overwhelming majority of cases, is, of course, the mother.

Evidence on this issue is provided by the average income for separated and non-separated family heads. For example, 1973, the median income for all families headed by a male with wife present and at least one child under six was $12,000. The corresponding figure for a single-parent female-headed family was

$3600, less than 30% of the income for an intact family, and far below the poverty line. It is important to bear in mind that these are nationwide statistics.

The nature and extent of this inequity is further underscored when we take note that the average income for the small proportion of father-headed single-parent families with preschool children was $9500. In other words, it is only the single-parent mother who finds herself in severely strained financial circumstances. Economic deprivation is even more extreme for single-parent mothers under the age of 25. Such a mother, when all her children are small (i.e., under 6), must make do with a median income of only $2800. Yet there are more than a million and a half mothers in this age group, and they constitute one-third of all female-headed families with children under six.

Does this mean that the low income is primarily a consequence rather than a cause of single-parent status? To answer this question directly we would need to know the income of the family before the split. Unfortunately this information was not obtained in the census interview. We do have data, however, that are highly correlated with the family's socio-economic status and generally precede the event of separation; namely, the mother's level of schooling. Is it the well-educated or poorly educated woman who is most likely to become a single parent?

The answer to this question appears in Figure 8. In general, the less schooling she has experienced, the more likely is the mother to be left without a husband. There is only one exception to the general trend. The proportion tends to be highest, and has risen most rapidly, not for mothers receiving only an elementary education, but for those who attended high school but failed to graduate. It seems likely that many of these are unwed mothers who left school

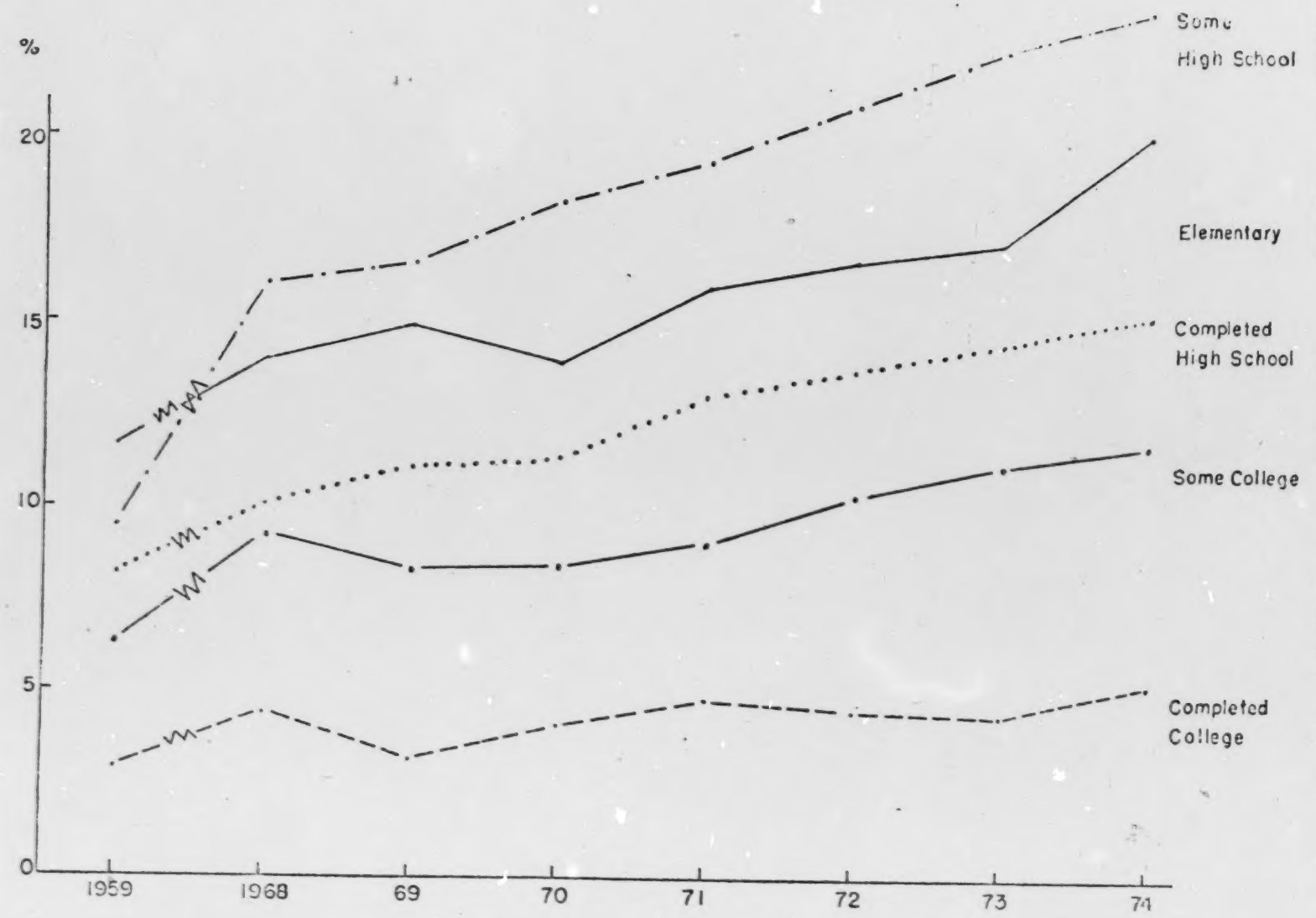

Figure 8. Percentage of Families Headed by Single Spouse by Education of Head

because of this circumstance. Consistent with this interpretation, further analysis reveals that the foregoing pattern occurs only for women in the younger age groups, and is most marked for mothers of children from 0 to 3 years of age. In 1974, among mothers of infants in this age group, 14%, or one out of every seven, was a high school dropout.

This diagram is misleading in one respect. It leaves the impression that there has been little increase recently in the percent of single-parent families among college graduates. A somewhat different picture emerges, however, when the data are broken down simultaneously by age of mother or child. When this is done, it becomes apparent that college graduates are more likely to defer family breakup until children are older. Once they can be entered into school, or even preschool, the rates of parental separation go up from year to year, especially among the younger generation of college educated parents.

In the case of split families, we are in a position to examine not only who is likely to become an only parent, but also where, in terms of place of residence. Figure 9 shows the rise over the last six years in the percentage of single-parent families with children under six living in non-urban and suburban areas, and in American cities increasing in size from 50,000 to over 3,000,000. The graph illustrates at least three important trends. First, the percentage of single-parent families increases markedly with city size, reaching a maximum in American metropolises with a population of over 3 million. Second, the growing tendency for younger families to break up more frequently than older ones is greatest in the large urban centers and lowest in non-urban and suburban areas. Thus the proportion of single parents reaches its maximum among families with heads under 35 and living in cities with more than 3,000,000 persons. Here one out of three to four households has a single parent as the head. Finally, the most rapid change over time is occurring not in the larger cities but those

of medium size. This pattern suggests that the high levels of family fragmentation which, six years ago, were found only in major metropolitan centers, are now occurring in smaller urban areas as well.

The Ecology of a Race Difference. The question may well arise why, with all the breakdowns we have made--by age, income, education, and place of residence--we have not presented any data separately by race. We have deferred this separation for a reason which will become apparent in this next chart (Figure 10). It shows the rise, between 1960 and 1970, in the percentage of single-parent families by income of head within three types of residence areas: urban, suburban, and non-urban, separately for Black and White families. Unfortunately, no breakdown was available within the urban category by city size so that, as a result, the effects of this variable are considerably attenuated. Nevertheless, it is clear that both income and place of residence make an independent contribution to the level and size of broken families.

Turning to the issue of race, note that in the graph, the rising lines for Blacks and Whites are almost parallel. In other words, within each setting and income level, the percentage of single parents is increasing about as fast for Whites as it is for Blacks. To put it in more general terms, families that live in similar circumstances, whatever their color, are affected in much the same ways. To be sure, at the end of the decade, the Blacks within each setting and income bracket experience a higher percentage of single-parent families than do the Whites. But they entered the decade in the same relative positions. This suggests that some different experiences prior to 1960 must have contributed to the disparity we now observe between Black and White families living in similar conditions. One does not have to seek long in the historical records, especially those written by Blacks, to discover what some of these experiences may have been.

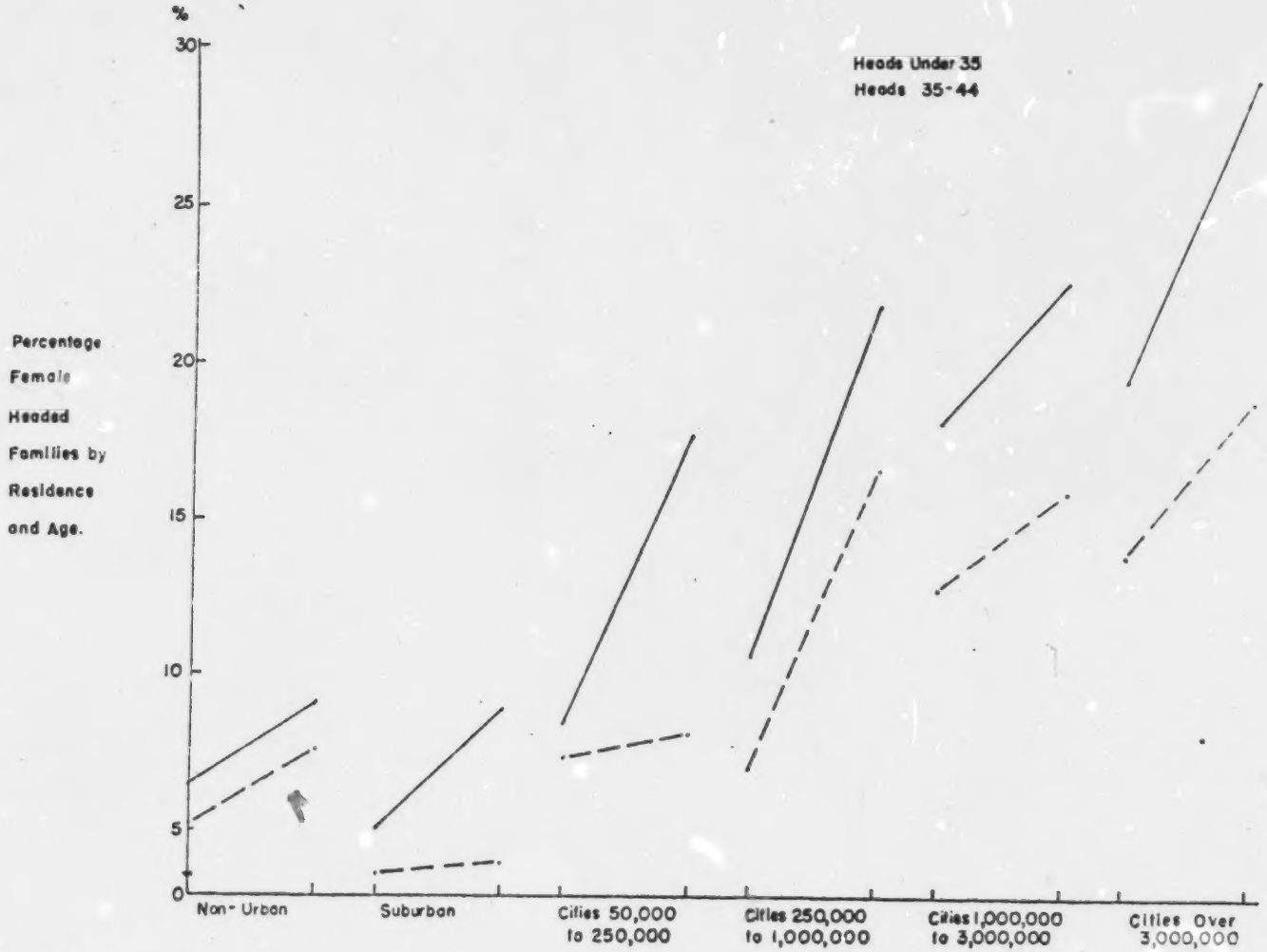

Figure 9. Percentage Female Headed Families with Children under 6, 1968-1974, by Place of Residence and Age of Family Head.

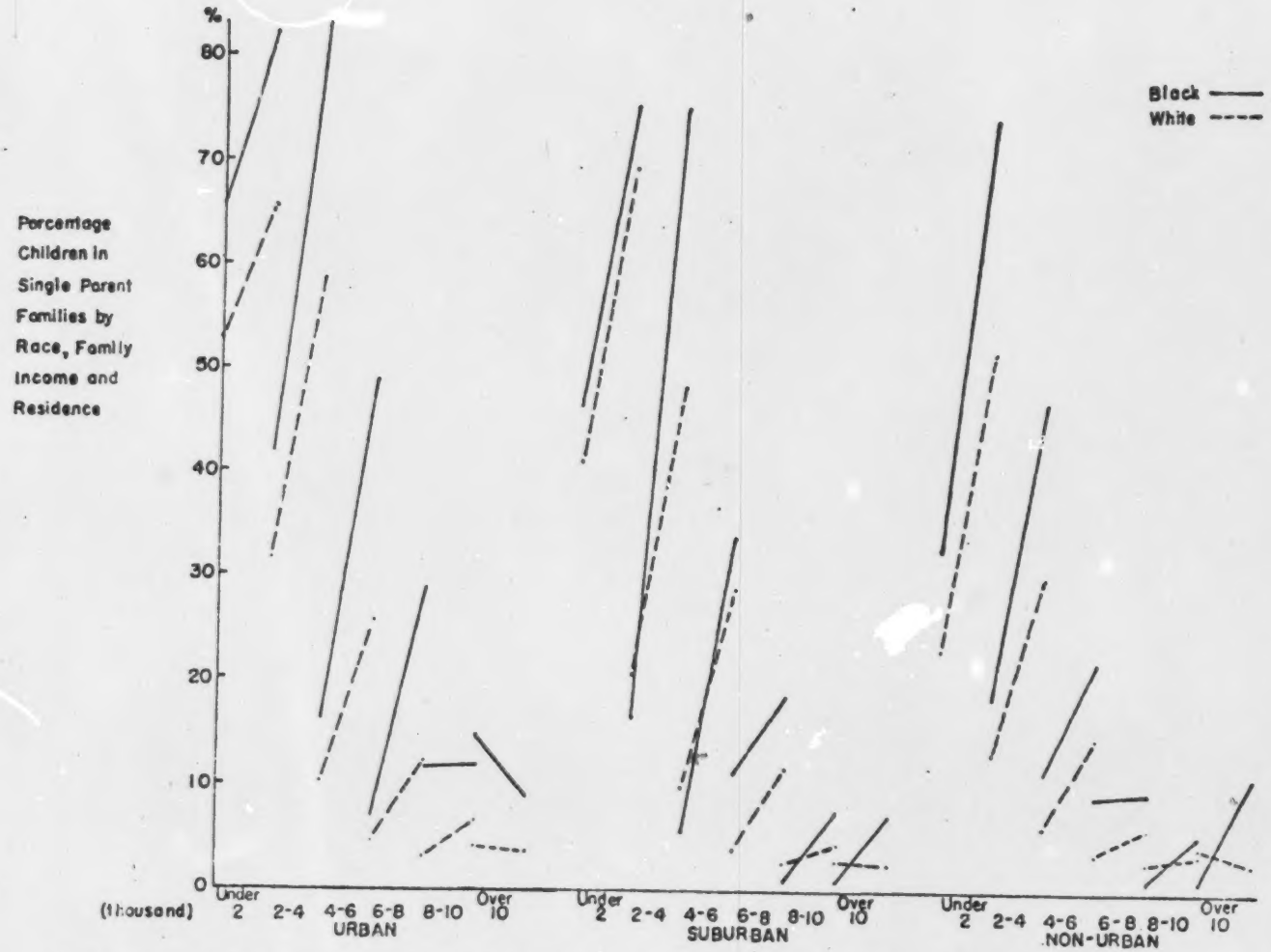

Figure 10. Percentage of Children in Single Parent Families by Race, Family Income in Previous Year, and Residence.
(Each line segment shows change from 1960-1970.)

But, of course, in reality the overwhelming majority of Blacks and Whites do not live in similar circumstances. It is only in our artifically selected comparison groups, especially in the context which is most homogeneous, namely, suburbia, that data for the two races begin to look alike. Without statistical control for income and urbanization, the curves for the two races are rather different; they are much farther apart, and the curve for Blacks rises at a substantially faster rate. Specifically, between 1960 and 1970, the percentage of single-parent families among Blacks increased at a rate five times that for Whites, and at the end of that period the percentage was over four times as high, 35% versus 8%. In the last four years, both figures have risen and the gap has widened. In 1974, the percentage of single-parent families with children under 18 was 13% for Whites and 44% for Blacks.

This dramatic disparity becomes more comprehensible, however, when we apply what we have learned about the relation of urbanization and income to family disruption. Upon inquiry, we discover that in 1974 about 6% of all White families with children under 18 were living in cities with a population of 3 million or more, compared to 21% for Blacks, over three and one-half times as high; this ratio has been rising steadily in recent years.

Turning to family income, in 1973, the latest year for which the data are available, the median income for an intact family with children under six was $12,300 when the family was White, $6700 when it was Black. Ironically, single-parenthood reduced the race difference by forcing both averages down below the poverty level--$3700 for Whites, $3400 for Blacks. Consistent with these facts, the percentage of Black families who fall below the poverty line is much higher than that for Whites. In 1973, 33%, or one-third, of all Black families with children under 18, were classified in the low income bracket, compared to 8% for Whites, a ratio of over four to one. Moreover, the advantage of Whites over Blacks in family income, which decreased during the 1960's, reversed itself at

the turn of the decade and has been increasing since 1969. In the language of the latest census report:

> The 1973 median income for black families was 58 percent of the white median income and this continued a downward trend in this ratio from 61 percent, which occurred in both 1960 and 1970. In contrast to the 1970's, the ratio of black to white median family income had increased during the 1960's.[3a] (p. 5)

We can now understand why non-White mothers have gone to work in increasing numbers and at rates substantially higher than their White counterparts. In 1974, almost one-third of White married women with husbands present and children under six were in the labor force; the corresponding fraction for non-White families was over half (52%). Fifteen years ago, the gap between the racial groups was much smaller, 18% versus 28%, and it is of course the non-Whites who have increased at the faster rate.

But the more vulnerable position of Black families in American society becomes clearest when we examine the comparative exposure of both ethnic groups to the combined effects of low income and urbanization. Unfortunately, once again the data are not broken down by city size, but we can compare the distribution of Black and White families with children under 18 living in so-called "poverty areas" in urban, suburbia, and rural settings, further sub-classified by family income. A poverty area is a census tract in which 20% or more of the population was below the low income level in 1969. As might be expected, more

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[3a] U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 97, "Money Income in 1973 of Families and Persons in the United States," U.S. Government Printing Office, Washington, D.C., 1975.

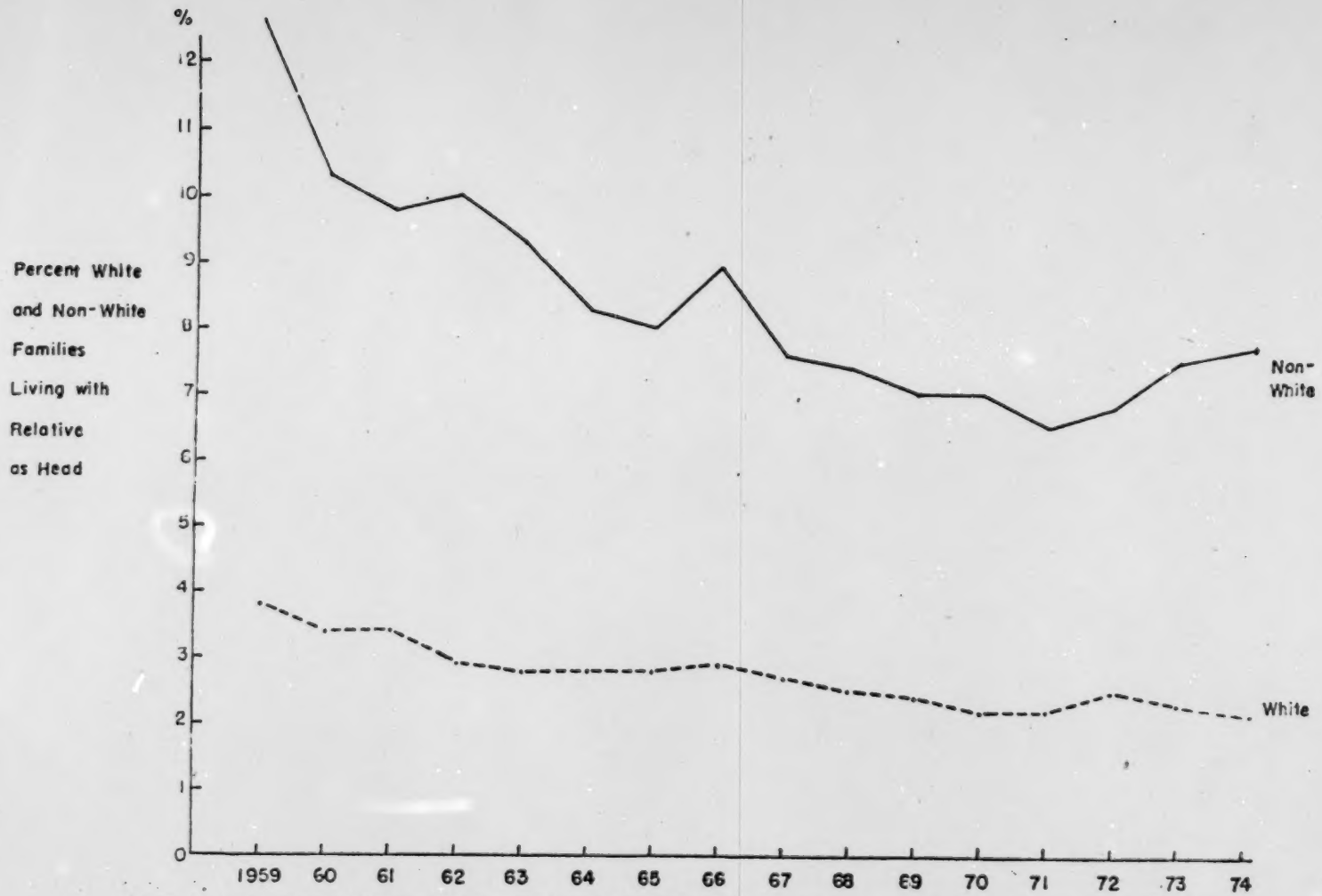

Figure 11 Percentage of White and Non-White Families with Children under 18 Living with a Relative as Family Head. (The base for the percentage is the total number of families for each race with children under 18.)

White families with children (44% of them) reside in suburbia than in central cities or rural areas, and the overwhelming majority (70%) live outside of poverty areas and have incomes above the poverty line. In contrast, the corresponding percentages for Black families are much smaller, 17% and 32% respectively; well over half of Black families (58%) are concentrated in central cities, more than half of these live in poverty areas within those cities, and half of these, in turn, have incomes below the poverty line. Seventeen percent, or one out of every six Black families with children under 18, are found in the most vulnerable ecological niche (low income in a poverty area of a central city), compared to less than 1% of all Whites. Even though only 14% of all American families with children are Black, among those living in poverty areas of central cities and having incomes below the poverty level, they constitute the large majority (66%).

The grossly differential distribution of Blacks and Whites in American society by income, place of residence, and other ecological dimensions which we have not been able to examine for lack of adequate data makes even more comprehensible the difference in degree of family disruption experienced by these two major classes of American citizens. Indeed, given the extent of the disparity in conditions of life, one wonders what keeps the figures for Black families from running even higher than they do.

A possible answer is suggested by the data provided in Figure 11 which shows our measure of "extended families" separately for White and non-White families. It will be observed that this index is consistently and markedly higher for non-Whites. In other words, non-Whites are much more likely to be living in a household that includes more than two generations, with another relative besides the child's parent acting as the family head. To be sure, the decline since 1959 has been greater for non-Whites than for Whites, but the former curve has shown an upswing in the last four years.

But there are other less favorable developments as well. If we examine, separately by race, the extent to which single parents head their own families, we observe that the same trend toward greater isolation for both Whites and non-Whites. As we see in Figure 12, these two curves are almost indistinguishable. Again, regardless of color, families in similar circumstances are affected in the same way for better or for worse.

What this means is that the disparity in the fate of White and Black families in American society is a reflection of the way in which our society now functions and, hence, is subject to change if and when we decide to alter our policies and practices.

We have now completed our analysis of changes in the American family over the past quarter century. For the nation as a whole, the analysis reveals progressive fragmentation and isolation of the family in its child rearing role. With respect to different segments of American society, the changes have been most rapid among younger families with younger children, and increase with the degree of economic deprivation and industrialization, reaching their maximum among low income families living in the central core of our largest cities. But the general trend applies to all strata of the society. Middle class families, in cities, suburbia, and non-urban areas, are changing in similar ways. Specifically, in terms of such characteristics as the proportion of working mothers, number of adults in the home, single-parent families, or children born out of wedlock, the middle class family of today increasingly resembles the low income family of the early 1960's.

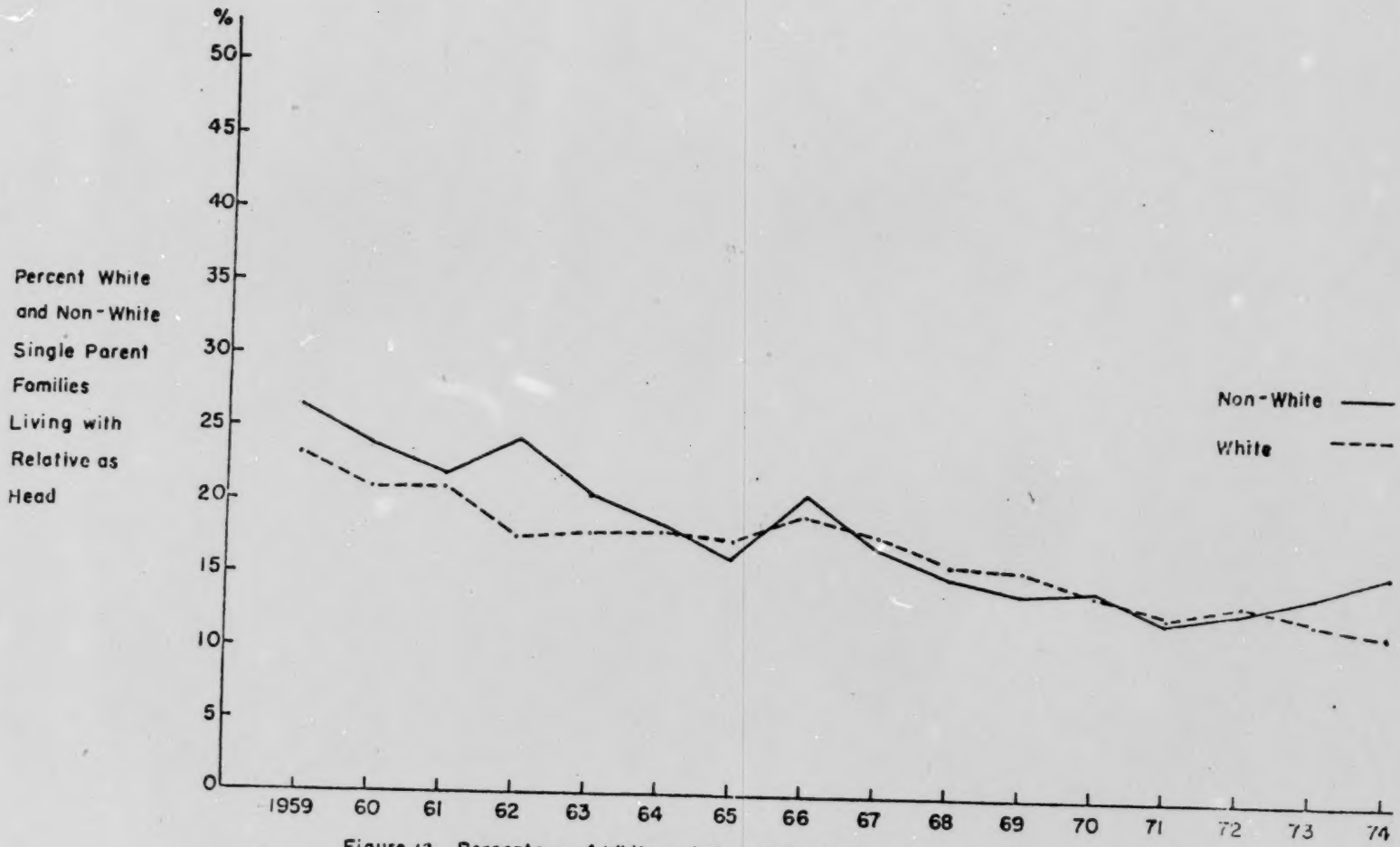

Figure 12. Percentage of White and Non-White Single Parent Families with Children under 18 Living with a Relative as Family Head.

(The base for the percentage is the total number of single parent families for each race with children under 18.)

IV The Changing American Child

Having described the changes in the structure and status of the American family, we are now ready to address our next question: So what? Or, to be more formal and explicit, what do these changes mean for the well-being and growth of children? What does it mean for the young that more and more mothers, especially mothers of preschoolers and infants, are going to work, the majority of them full-time? What does it mean that, as these mothers leave for work, there are also fewer adults in the family who might look after the child, and that, among adults who are leaving the home, the principal deserter is one or the other parent, usually the father?

Paradoxically, the most telling answer to the foregoing questions is yet another question which is even more difficult to answer: Who cares for America's children? Who cares?

At the present, substitute care for children of whatever form--nursery schools, group day care, family day care, or just a body to babysit--falls so far short of the need that it can be measured in millions of children under the age of six, not to mention the millions more of school age youngsters, so-called "latch-key" children, who come home to empty houses, and who contribute far out of proportion to the ranks of pupils with academic and behavior problems, have difficulties in learning to read, who are dropouts, drug users, and juvenile delinquents.

But we are getting ahead of our story. We have seen what has been happening to America's families. Let us try to examine systematically what has been happening to the American child. Unfortunately, statistics at a national level on the state of the child are neither as comprehensive nor as complete as those on the state of the family, but the available data do suggest a pattern consistent with the evidence from our prior analysis.

We begin at the level at which all the trends of disorganization converge. For this purpose, there is an even better index than low income level--one that combines economic deprivation with every kind--health, housing, education, and welfare. Let us look first at children who are born to American citizens whose skin color is other than white.

1. Death in the first year of life.

The first consequence we meet is that of survival itself.

In recent years, many persons have become aware of the existance of the problem to which I refer, but perhaps not of the evidence for its practical solution. America, the richest and most powerful country in the world, stands fourteenth among the nations in combating infant mortality; even East Germany does better. Moreover, our ranking has dropped steadily in recent decades. A similar situation obtains with respect to maternal and child health, day care, children's allowances, and other basic services to children and families.

But the figures for the nation as a whole, dismaying as they are, mask even greater inequities. For example, infant mortality for non-Whites in the United States is almost twice that for Whites, the maternal death rate is four times as high, and there are a number of Southern states, and Northern metropolitan areas, in which the ratios are considerably higher. Among New York City health districts, for example, the infant mortality rate in 1966-67 varied from 13 per 1000 in Haspeth, Forest Hills to 41.5 per 1000 in Central Harlem.[4] One illuminating way of describing the differences in infant mortality by race is from a time perspective. Babies born of non-White mothers are today dying at a rate which White babies have not experienced for almost a quarter of a century. The current non-White rate of 28.1 was last reported for American Whites in the late 1940's. The rate for Whites in 1950, 26.8%, was not yet achieved by non-Whites in 1974. In fact in recent years the gap between the races, instead of narrowing, has been getting wider.

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[4]Kessner, D.S., et al. Infant Death: An analysis by maternal risk and health care. Washington, D.C.: Institute of Medicine, National Academy of Sciences, 1973.

The way to the solution is suggested by the results of the two-stage analysis carried out by Dr. Harold Watts for the Advisory Committee on Child Development of the National Academy of Sciences. First, Watts demonstrated that 92% of the variation in infant death among the 30 New York City health districts is explainable by low birth weight. Second, he showed that 97% of the variation in low birth weight can be attributed to the fraction of mothers who received no prenatal care or received care only late in their pregnancy, and the fraction unwed at the time of delivery.

Confirmatory evidence is available from an important and elegant study, published in 1973, on the relations between infant mortality, social and medical risk, and health care.[5] From an analysis of data in 140,000 births in New York City, the investigators found the following:

1. The highest rate of infant mortality was for children of Black native-born women at social and medical risk and with inadequate health care. This rate was 45 times higher than that for a group of White mothers at no risk with adequate care. Next in line were Puerto Rican infants with a rate 22 times as high.

2. Among mothers receiving adequate medical care, there was essentially no difference in mortality among White, Black, and Puerto Rican groups, even for mothers at high medical risk.

3. For mothers at socio-economic risk, however, adequate medical care substantially reduced infant mortality rates for all races, but the figures for Black and Puerto Rican families were still substantially greater than those for Whites. In other words, other factors besides inadequate medical care contribute to producing the higher infant mortality for these non-White groups. Again these factors have to do with the social and economic conditions in which these

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[5] Kessner, et al., op cit.

families have to live. Thus, the results of the New York City study and other investigations point to the following characteristics as predictive of higher infant mortality: employment status of the breadwinner, mother unwed at infant's birth, married but no father in the home, number of children per room, mother under 20 or over 35, and parents' educational level.

4. Approximately 95% of those mothers at risk had medical or social conditions that could have been identified at the time of the first prenatal visit; infants born to this group of women accounted for 70% of the deaths.

What would have happened had these conditions been identified and adequate medical care provided? The answer to this question has recently become available from an analysis of data from the Maternal and Infant Care Projects of HEW which, in the middle 1960's, were established in slum areas of fourteen cities across the nation and in Puerto Rico. In Denver, a dramatic fall in infant mortality from 34.2 per 1000 live births in 1964 to 21.5 per 1000 in 1969 was observed for the 25 census tracts that made up the target area for such a program. In Birmingham, Alabama, the rate decreased from 25.4 in 1965 to 14.3 in 1969, and in Omaha from 33.4 in 1964 to 13.4 in 1960. Significant reductions have also occurred over the populations served by these programs in prematurity, repeated teenage pregnancy, women who conceive over 35 years old, and families with more than four children.

It is a reflection of our distorted priorities that these programs are currently in jeopardy, even though their proposed replacement through revenue sharing is not yet on the horizon. The phasing out of these projects will result in a return of mortality to earlier levels; more infants will die.

2. <u>The interplay of biological and environmental factors</u>.

The decisive role that environmental factors can play in influencing the biological growth of the organism, and, thereby, its psychological development, is illustrated by a series of recent follow-up studies of babies experiencing

prenatal complications at birth, but surviving and growing up in families at different socio-economic levels. As an example we may take an excellently designed and analyzed study by Richardson.[6] It is a well established finding that mothers from low income families bear a higher proportion of premature babies, as measured either by weight at birth or gestational age, and that prematures generally tend to be somewhat retarded in mental growth. Richardson studied a group of such children in Aberdeen, Scotland from birth through seven years with special focus on intellectual development. He found, as expected, that children born prematurely to mothers in low income families showed significantly poorer performance on measures of mental growth, especially when the babies were both born before term and weighed less than five pounds. The average I.Q. for these children at seven years of age was 80. But the higher the family's socio-econom. level, the weaker the tendency for birth weight to be associated with impaired intellectual function. For example, in the higher social class group, infants born before term and weighing under five pounds had a mean I.Q. of 105, higher than the average for the general population, and only five points below the mean for full term babies of normal weight born to mothers in the same socio-economic group. In other words, children starting off with the same biological deficits ended up with widely differing risks of mental retardation as a function of the conditions of life for the family in which they were born.

But low income does not require a biological base to affect profoundly the welfare and development of the child. To cite but two examples. Child abuse

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[6] Richardson, S.A., Ecology of malnutrition: Non-nutritional factors influencing intellectual and behavioral development. In Nutrition, the Nervous System, and Behavior. Scientific Publication #251, Pan American Health Organization, Washington, D.C., 1972, pp. 101-110.

is far more common in poor than in middle income families,[7] and the socio-economic status of the family has emerged as the most powerful predictor of school success in studies conducted at both the national and state level.[8]

Nor does income tell the whole story. In the first place, other social conditions, such as the absence of the parent have been shown to exacerbate the impact of poverty. For example, in low income homes, child abuse is more likely to occur in single-parent than in intact families, especially when the mother is under 25 years of age.[9] It is also the young mother who is most likely to have a premature baby.

In terms of subsequent development, a state-wide study in New York of factors affecting school performance at all grade levels[10] found that 58% of the variation in student achievement could be predicted by three factors: broken homes, overcrowded housing, and the educational level of the head of the household; when racial and ethnic variables were introduced into the analysis, they accounted for less than an additional 2% of the variation.

Finally, and perhaps most importantly, low income may not be the critical factor affecting the development and needs of children and families. The most powerful evidence for this conclusion comes from census data on trends in family income over the past quarter century. Even after adjustment for inflation, the

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[7] Gil, D.G. Violence against children: Physical child abuse in the United States. Cambridge, Mass.: Harvard University Press, 1970.

[8] Coleman, J.S. Equality of educational opportunity. Washington, D.C.: U.S. Office of Education, 1966; Jencks, C. Inequality. New York: Basic Books, 1972; Report of the New York State Commission on the Quality, Cost, and Financing of Elementary and Secondary Education. Vol. 1.

[9] Gil, ibid.

[10] Report of the New York State Commission. ibid.

level has been rising steadily at least through 1974, and for Black families as well as White. A reflection of this fact is a drop over the years in the percentages of children in families below the poverty line, 27% in 1959, 15% in 1968, and 14% in 1973.[11]

3. Changes Over Time

And yet, as we have seen, the percentage of single-parent families has been growing, especially in recent years. And there are analogous trends for indices bearing on the state and development of the child. Although lack of comparability between samples and measures precludes a valid assessment of change in child abuse rates, an index is available for this phenomenon in its most extreme form; homicide, or the deliberate killing of a child. As shown in Figure 13, the rate has been increasing over time for children of all ages. Adolescents are more likely to be the victims of homicide than younger children except in the first year of life, in which the rates again jump upward.

Children who survive face other risks. For example, the New York study cited earlier[12] reports a secular trend in the proportion of children failing to perform at minimal levels in reading and arithmetic: each year "more and more children are below minimum competence."

One might conclude that such a decrease in competence is occurring primarily, if not exclusively, among families of lower socio-economic status, with limited income, education, and cultural background. The data of Figure 14 suggest that the trend may be far more democratic. The graph shows the average score achieved each year in the verbal and mathematical sections of the Scholastic Aptitude Test, taken by virtually all high school juniors and seniors who plan to go to college. The test scores are used widely as the basis for determining

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[11] Unfortunately, the curve levelled off in 1969 and has shown no decline in the 1970's.

[12] New York State Commission, op cit.

admission. As is apparent from the figure, there has been a steady and substantial decrease over the past decade--35 points in the verbal section, 24 in the mathematical section. In interpreting the significance of this decline, Dr. T. Anne Clarey, Chief of the Program Services Division of the College Board, warned that it is incorrect to conclude from a score decline that schools have not been preparing students in verbal and mathematical skills as well as they have in former years. "The SAT measures skills developed over a youngster's life time--both in and out of the school setting. ...It is evident that many factors, including family and home life, exposure to mass media, and other cultural and environmental factors are associated with students' performance."[13]

Finally, the remaining sets of data shift attention from the cognitive to the emotional and social areas. Figures 15 and 16 document the increase in suicide rates in recent years for children as young as ten. Figure 17 shows

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[13]Press release, College Entrance Examination Board, New York, New York, December 20, 1973. A recent report in Time (March 31, 1975) quotes Sam McCandless, director of admissions testing for the College Entrance Examination Board, as refuting arguments that the decrease in SAT scores is not "real" but a reflection of changes on the tests or in the social composition of students taking them. According to McCandless, the reason for the drop is a decline in students' "developed reasoning ability."

The same article reports two other developments which corroborate the downward trend in learning:

> The National Assessment of Educational Progress--a federally funded testing organization--reported last week that students knew less about science in 1973 than they did three years earlier. The test, which covered 90,000 students in elementary and junior and senior high schools in all parts of the nation, showed the sharpest decline among 17-year-olds in large cities, although suburban students' test scores fell too.
>
> The results of the third study, sponsored by the U.S. Department of Health, Education and Welfare and announced last week, showed that public school students' reading levels have been falling since the mid-1960s.

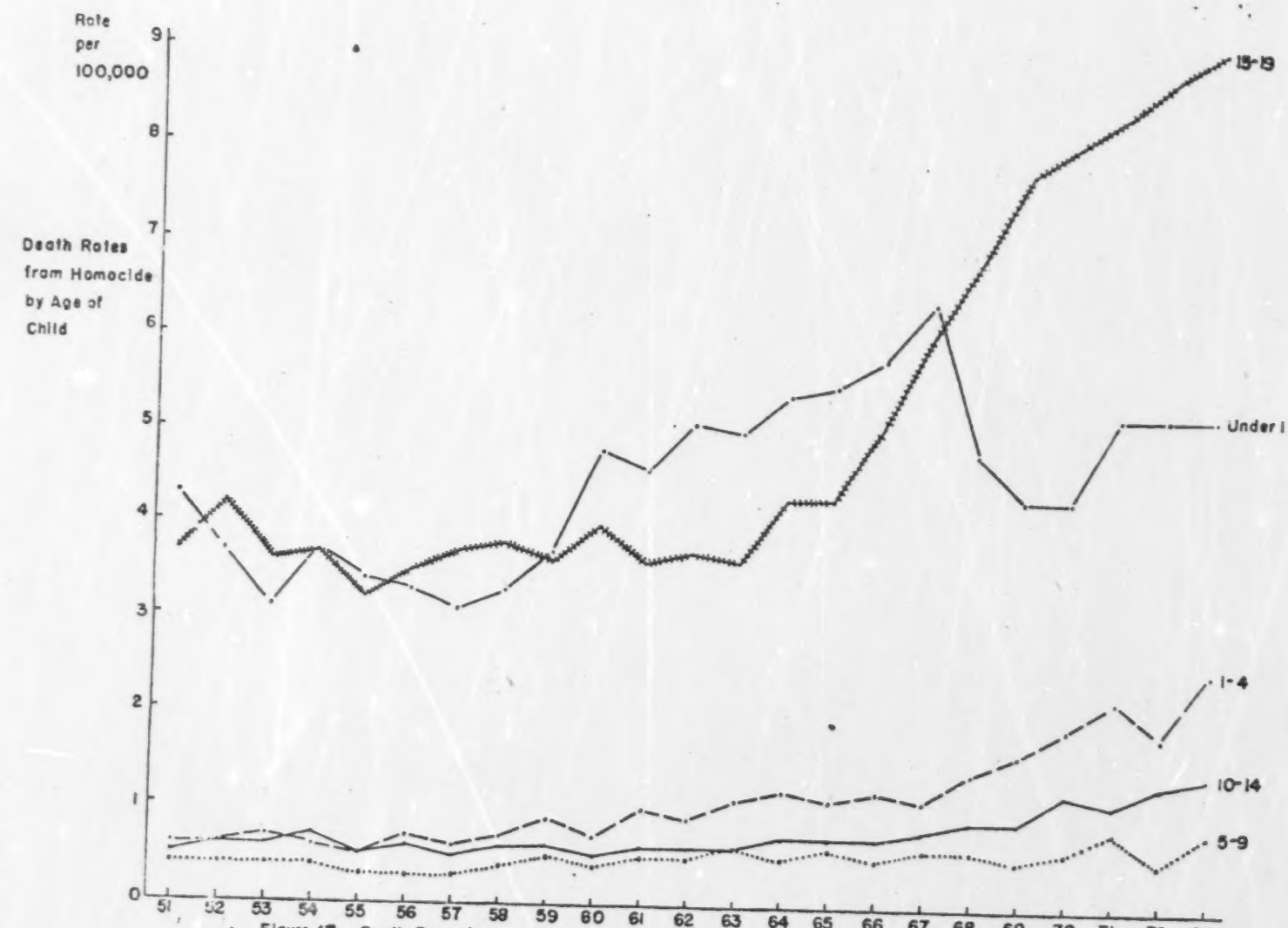

Figure 13. Death Rates from Homocide by Age of Child Victim, 1951-1973.

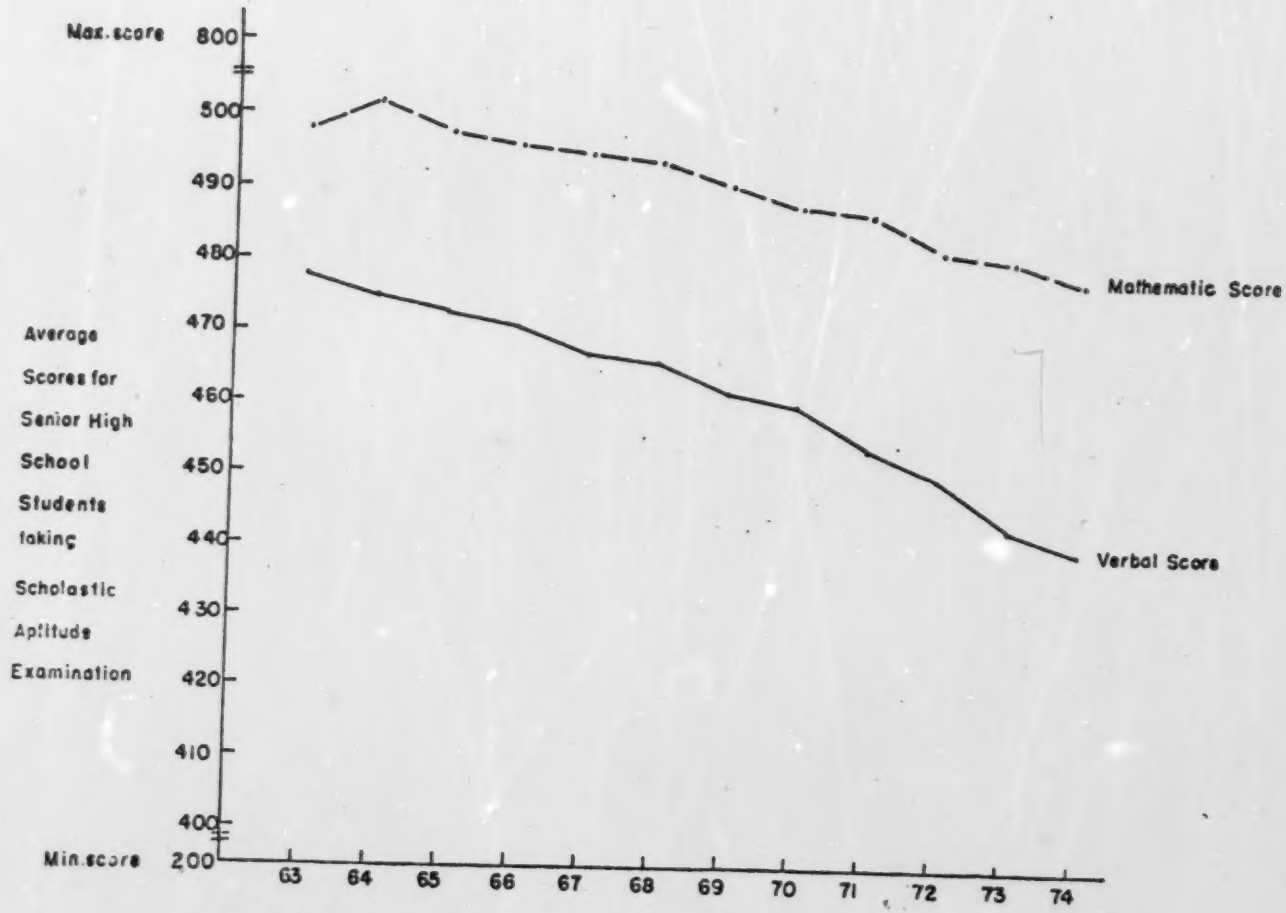

Figure 14. Average Scores for Senior High School Students taking the Scholastic Aptitude Examinations: 1963-1974*

*Data provided courtesy Educational Testing Service.

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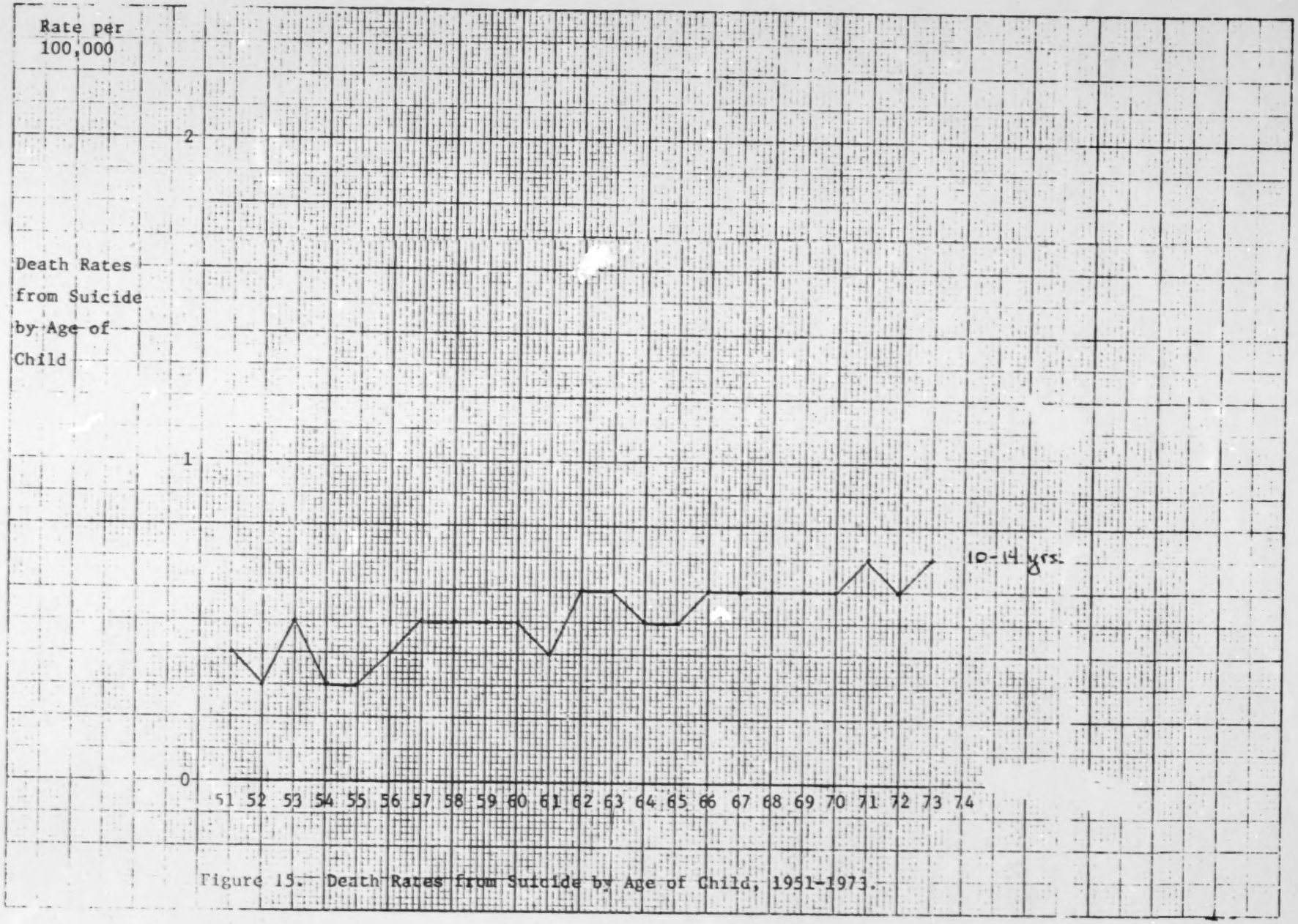

Figure 15. Death Rates from Suicide by Age of Child, 1951-1973.

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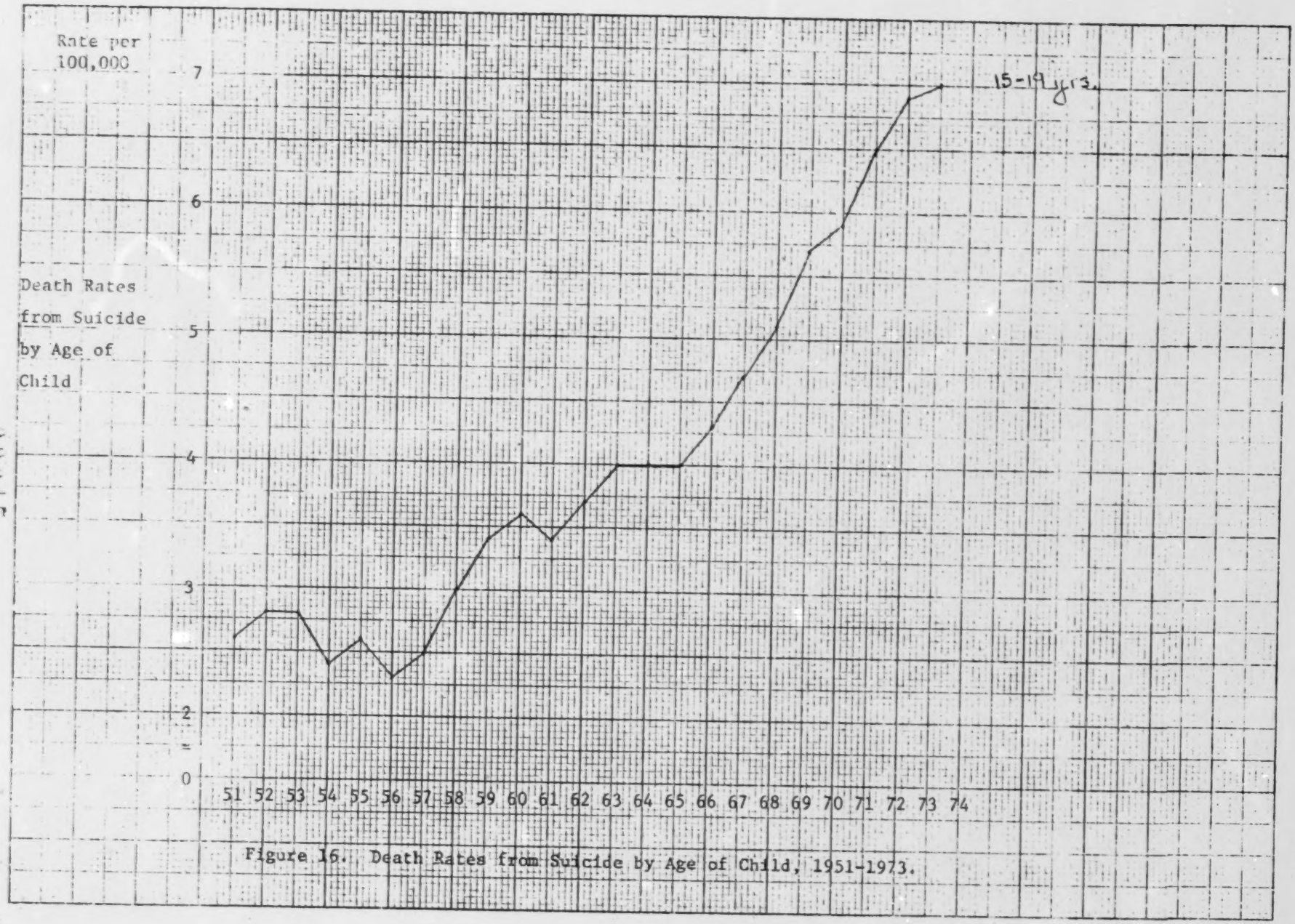

Figure 16. Death Rates from Suicide by Age of Child, 1951-1973.

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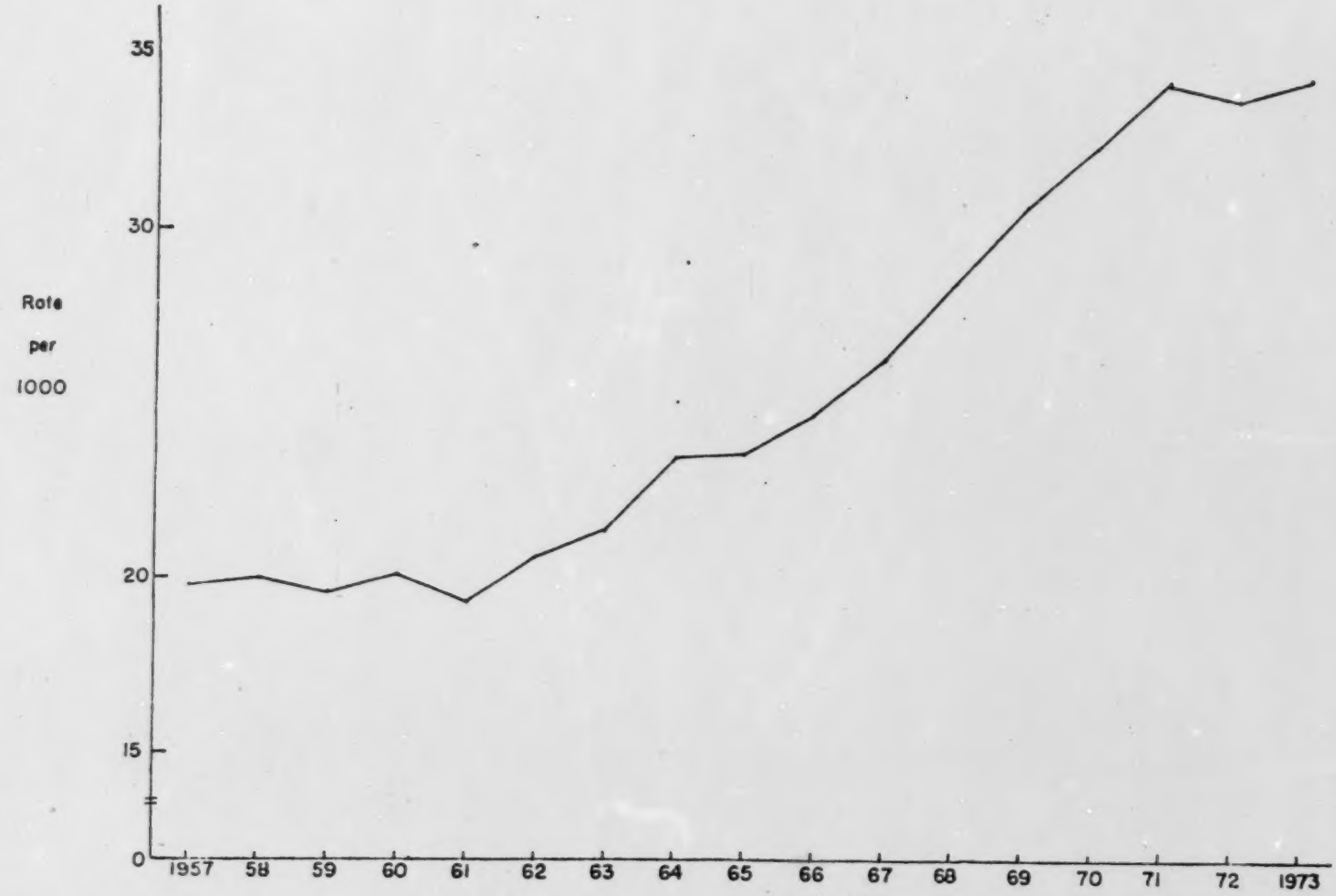

Figure 17. Rate of Delinquency Cases Disposed of by Juvenile Courts involving Children 10 through 17 years of age.

an even more precipitous climb in the rate of juvenile delinquency. Since 1963, crimes by children have been increasing at a higher rate than the juvenile population. In 1973, among children under 15,[14] almost half (47%) of all arrests involved theft, breaking and entry, and vandalism, and, with an important exception to be noted below, these categories were also the ones showing the greatest increase over the past decade. The second largest grouping, also growing rapidly, constituted almost a quarter of all offenses[15] and included loitering, disorderly conduct, and runaways. The most rapid rises, however, occurred in two other categories, drug use and violent crimes. In 1973, drug arrests accounted for 2.6% of all offenses by children under 15. The precise rate of increase over time is difficult to estimate because of inconsistant enforcement and reporting. In the same year, the next most rapid rise was for violent crimes (aggravated assault, armes robbery, forcible rape, and murder). These accounted for 3.3% of all arrests. While the proportion of children involved is of course very small, this figure represents at least a 200% increase over the 1964 level.[16] And the total number of children with a criminal record is substantial. "If the present trends continue, one out of every nine youngsters will appear before a juvenile court before age 18."[17] The figures, of course, index only offenses that are detected and prosecuted. One wonders how high the numbers must climb before we acknowledge that they reflect deep and pervasive problems in the treatment of children and youth in our society.

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[14] The figures which follow are based on the Uniform Crime Reports for the United States published annually by the Federal Bureau of Investigation.

[15] It is noteworthy that the highest level and most rapid rise within this grouping occurred for runaways, an increase of more than 240% since 1964 (the rate has decreased somewhat since 1970). It would appear that the trend we have observed in the progressive break-up of the family includes the departure not only of its adult members, but its children as well.

[16] We may take what comfort we can from the fact that the reported rates of drug arrests and of juvenile violence have dropped somewhat since 1970.

[17] Profiles of Children. White House Conference on Children, Washington, D.C., 1970, p. 79.

V The Roots of Alienation

What are the basic sources of these problems? The data we have examined point the accusing finger most directly at the destructive effect, both on families and children, of economic deprivation. In the light of our analysis, there can be no question that variation in income plays a critical role in accounting for the marked differences in the state of families and their children in different segments of American society. Hence, the keystone for any national policy in this sphere must insure basic economic security for American families.

But while income is crucial to the understanding and reduction of cross-sectional differences, our analyses indicate that the financial factor, taken by itself, cannot explain, or counteract, the profound longitudinal changes that have been taking place over the past quarter century, and that are documented in so many of our charts and figures. Other forces besides the purely economic have been operating to produce the present state of affairs, and will need to be invoked to bring about any desired improvement. These forces are reflected, but not identified, in our data on the effects of urbanization. Available research does not enable us to pin them down with any degree of precision, but some indication of their possible nature is provided from studies of child socialization and development in other cultures.[18] These investigations call

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[18] Berfenstam, R. & William-Olsson, I. Early child care in Sweden. New York: Gordon and Breach, 1974; Bronfenbrenner, U. Two worlds of childhood: U.S. and U.S.S.R. New York: Russell Sage Foundation, 1970; David M. & Lezine, I. Early child care in France. New York: Gordon and Breach, 1975; Devereux, E.C., Jr., et al. Child rearing in England and the United States: A cross-national comparison. Journal of Marriage and the Family, May 1969, 31, 257-270; Hermann, A. & Komlosi, S. Early child care in Hungary. New York: Gordon and Breach, 1973; Kessen, W. Children and China. New Haven: Yale Univ. Press, in press; Liegle, L. The family's role in Soviet education. New York: Springer Pub. Co., in press; Lüscher, K.L. et al. Early child care in Switzerland. New York: Gordon and Breach, 1973; Pringle. M.K. & Naidoo, S. Early child care in Britain. New York: Gordon and Breach, 1975; Robinson, H.B., et al. Early child care in the United States of America. New York: Gordon and Breach, 1973; Rodgers, R.R. Changes in parental behavior reported by children in West Germany and the United States. Human Development, 1971, 14, 208-224.

attention to a distinctive feature of American child-rearing: segregation, not by race or social class, but by age. Increasingly, children in America are living and growing up in relative isolation from persons older, or younger than themselves. For example, a survey of changes in child rearing practices in the United States over a 25-year period reveals a decrease in all spheres of interaction between parent and child.[19] A similar trend is indicated by data from cross-cultural studies comparing American families with their European counterparts.[20] Thus, in a comparative study of socialization practices among German and American parents, the former emerged as significantly more involved in activities with their children including both affection and discipline. A second study, conducted several years later, showed changes over time in both cultures reflecting "a trend toward the dissolution of the family as a social system," with Germany moving closer to the American pattern of "centrifugal forces pulling the members into relationships outside the family."[21]

Although the nature and operation of these centrifugal forces have not been studied systematically, they are readily apparent to observers of the American scene. The following excerpt from the report of the President's White House Conference on Children summarizes the situation as seen by a group of experts, including both scientists and practitioners.

> In today's world parents find themselves at the mercy of a society which imposes pressures and priorities that allow neither time nor place for meaningful activities and relations between children and adults, which downgrade the

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[19] Bronfenbrenner, U. Socialization and social class through time and space. In E.E. Maccoby, T.M. Newcomb, and E. Hartley (Eds.), Readings in Social Psychology, 3rd edition. New York: Holt, 1958, 400-425.

[20] Bronfenbrenner, 1970, op cit.; Devereux, et al., 1969, op cit.

[21] Rodgers, 1971, op cit.

> role of parents and the functions of parenthood, and which prevent the parent from doing things he wants to do as a guide, friend, and companion to his children...
>
> The frustrations are greatest for the family of poverty where the capacity for human response is crippled by hunger, cold, filth, sickness, and despair. For families who can get along, the rats are gone, but the rat-race remains. The demands of a job, or often two jobs, that claim mealtimes, evenings, and weekends as well as days; the trips and moves necessary to get ahead or simply hold one's own; the ever increasing time spent in commuting, parties, evenings out, social and community obligations--all the things one has to do to meet so-called primary responsibilities--produce a situation in which a child often spends more time with a passive babysitter than a participating parent.[22]

Although no systematic evidence is available, there are indications that a withdrawal of adults from the lives of children is also occurring outside the home. To quote again from the report of the White House Conference:

> In our modern way of life, it is not only parents of whom children are deprived, it is people in general. A host of factors conspire to isolate children from the rest of society. The fragmentation of the extended family, the separation of residential and business areas, the disappearance

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[22] Report to the President. White House Conference on Children. Washington, D.C.: U.S. Government Printing Office, 1970, 240-255.

> of neighborhoods, zoning ordinances, occupational mobility, child labor laws, the abolishment of the apprentice system, consolidated schools, television, separate patterns of social life for different age groups, the working mother, the delegation of child care to specialists--all these manifestations of progress operate to decrease opportunity and incentive for meaningful contact between children and persons older, or younger, than themselves.[23]

This erosion of the social fabric isolates not only the child but also his family. As documented in earlier sections of this report, even in intact families the centrifugal forces generated within the family by its increasingly isolated position have propelled its members in different directions. As parents, especially mothers, spend more time in work and community activities, children are placed in or gravitate to group settings, both organized and informal. For example, since 1965 the number of children enrolled in day care centers has more than doubled, and the demand today far exceeds the supply. Outside preschool or school, the child spends increasing amounts of time solely in the company of his age-mates. The vacuum created by the withdrawal of parents and other adults has been filled by the informal peer group. A recent study has found that at every age and grade level, children today show a greater dependency on their peers than they did a decade ago.[24] A parallel investigation indicates that such

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[23] Report of Forum 15. White House Conference on Children. Washington, D.C., 1970.

[24] Condry, J.C. & Siman, M.A. Characteristics of peer- and adult-oriented children. Unpublished manuscript, Cornell University, 1968.

susceptibility to group influence is higher among children from homes in which one or both parents are frequently absent.[25] In addition, "peer oriented" youngsters describe their parents as less affectionate and less firm in discipline. Attachment to age-mates appears to be influenced more by a lack of attention and concern at home than by any positive attraction of the peer group itself. In fact, these children have a rather negative view of their friends and of themselves as well. They are pessimistic about the future, rate lower in responsibility and leadership, and are more likely to engage in such anti-social behavior as lying, teasing other children, "playing hooky," or "doing something

What we are seeing here, of course, are the roots of alienation and its milder consequences. The more serious manifestations are reflected in the rising rates of child homicide, suicide, drug use, and juvenile delinquency previously cited.

How are we to reverse these debilitating trend? If our analysis is correct, what is called for is nothing less than a change in our way of life and our institutions, both public and private, so as to give new opportunity and status for parenthood, and to bring children and adults back into each other's lives. Specifically, we need to develop a variety of support systems for families, and for others engaged in the care of the Nation's children. We have documented elsewhere some of the concrete forms which such support systems might take in American society.[27]

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[25] Condry, J.C. & Siman, M.A. An experimental study of adult vs. peer orientation. Unpublished manuscript, Cornell University, 1968.

[26] Siman, M.A. Peer group influence during adolescence: A study of 41 naturally existing friendship groups. A thesis presented to the Faculty of the Graduate School of Cornell University for the degree of Doctor of Philosophy, January 1973.

[27] Bronfenbrenner, U. The origins of alienation. Scientific American, August 1974.

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VI Implications for Research

We began our discussion by asserting that the changes we would observe in the ecology of human development would lead to a new and more fruitful theoretical perspective for research. What is the new direction for investigation suggested by the results of our analyses?

One might expect from the nature and outcome of these analyses that we would now argue for systematic studies of the consequences for the child of the profound changes we have documented in the structure and position of the family in American society. But, desirable as such research would be, it does not represent, in our view, the most fruitful approach to the study of human development in context. Specifically, we propose a reorientation to theory and research in socialization based on two guiding principles.

The first is perhaps most cogently expressed in the words of Professor A. N. Leontiev of the University of Moscow. At the time, a decade ago, I was an exchange scientist at the Institute of Psychology. We had been discussing differences in the assumptions underlying research on socialization in the Soviet Union and in the United States. Leontiev's statement was the following: "It seems to me that American researchers are constantly seeking to explain how the child came to be what he is; we in the U.S.S.R. are striving to discover not how the child came to be what he is, but how he can become what he not yet is."

One reason why I remember Professor Leontiev's challenging comment is that it echoed the advice given me a quarter of a century earlier by my first mentor in graduate school Professor Walter Fenno Dearborn of Harvard. In his quiet, crisp New England accent, he once remarked: "Bronfenbrenner, if you want to understand something, try to change it."

In short, I propose that the strategy of choice for future research in human development is one that applies the experimental method to alter

systematically the nature of the enduring environments in which children live and grow. The approach might be called: experimental human ecology.

The emphasis on systematic experimentation is prompted by two considerations. The first is painfully illustrated by the limitations of the kinds of data I have been presenting to you. They provide evidence of concurrent changes over time on the one hand, in the structure and position of the American family, and, on the other, in the abilities and character of American children. But as evidence for the existence, let alone the nature, of a causal connection between the two domains, the data are of course by no means adequate. There is confounding among variables not only within but also across domains, for one cannot be certain what is cause and what is effect. For example, a biologically damaged infant, or an aggressive child, could be a contributing factor in family disruption.

The second consideration that prompts an experimental approach arises not on grounds of science but of social policy. The trends we have documented are, I suggest, sufficiently widespread and destructive that we need to discover how they may be counteracted. And the best way to learn about change, is to try it. Thus considerations both of science and social policy support the validity and timeliness of Dearborn's dictum: "If you want to understand something, try to change it."

Criteria for a Program of Research. But knowing ends and means does not remove obstacles that stand in the way. In ironic validation of our ecological thesis, these obstacles also take the form of enduring environments--specifically, of established institutions, roles, and activities that resist alteration of the processes of socialization which prepare and perpetuate researchers in the prevailing mode. Accordingly, the first task to be accomplished if ecologically-

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oriented investigations are to be carried out in any substantial degree is to create institutional supports for such activity in the form of training, professional recognition, and, of course, research funds. At the present time, all of these are focused around success in implementing the traditional experimental model in laboratory settings. Unless this focus can be broadened, ecological research will paradoxically remain a purely academic exercise.

But there are grounds for hope. Over the past two years, with the support of a private foundation, the Foundation for Child Development, I have been developing a program of research in what we are calling "the ecology of human development." Recently, the Foundation made available funds for the support of small-scale investigations which approximate the distinctive properties of an ecological model as developed in this paper. As a convenient way of summarizing these distinctive properties, I present below the criteria that are being applied in the evaluation of research proposals under the Foundation's program.

These criteria are of two kinds: A. those that are deemed <u>essential</u> and B. <u>bonus</u> criteria, which are not regarded as necessary, but, if present, would give the proposal higher priority.

A. <u>Essential Criteria</u>

1) The proposed study must be concerned with the interplay between some enduring aspect of the person's environment and the development of an enduring human activity that has social significance in that environment.

2) A second criterion is that the study involve, as a basic element of the research design, the comparison of at least two different ecological systems or their components. This comparison may consist either of a true experiment in which subjects are assigned

at random to different treatments, or of an "experiment of nature" in which subjects are found in different environments and some effort is made to control for possibly confounding factors. Thus this requirement rules out proposals of several kinds; for example: purely case studies of individuals, groups, or settings; exploratory studies designed solely to identify variables or hypotheses for future research, or projects restricted to the development of methods.

B. Bonus Criteria

1) Higher priority is accorded to research that permits inferences about processes rather than providing solely a descriptive account of differences associated with varying social contexts.

2) Proposals that examine the effect of different ecological systems as systems are given priority over investigations limited to variables that are treated exclusively as linear, additive, and separable in their effects. This criterion does not exclude the use of linear variables for analyzing system components, or as inputs, outputs, or controls.

3) Proposals which assess effects of innovation or deliberately induced ecological change will be given higher priority than investigations of the status quo.

4) Priority will be given to proposals in which outcome variables go beyond conventional measures of intellectual performance and academic achievement to include assessments of social and motivational orientations and behavior on the part both of individuals (e.g., children, parents, teachers, community leaders) and social systems (e.g., schools, businesses, social agencies, communities).

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5) Designs involving relations among more than two people or systems are regarded as preferable to two-person or single system models.

6) Designs which go beyond the immediate contexts containing the person (e.g., family, classroom) to the higher order systems in which these immediate contexts are embedded (e.g., neighborhood, family, economic system) are regarded as preferable to designs confined to the immediate setting only.

7) Designs which allow for the possibility of reciprocal processes between persons and systems are given priority over unidirectional models.

8) Proposals in which the researcher's ideological assumptions are made explicit and in which the ideological significance of social setting, institution, roles, or activities becomes an object of investigation are regarded as preferable to designs in which ideological assumptions are ignored or taken for granted.

9) Proposals for research in which the social policy implications are apparent or made explicit are regarded as more appropriate than those in which practical and social implications remain implicit or unclear.

In addition to the foregoing substantive criteria, the program involves certain other distinctive features designed to encourage and assist research development along the indicated lines. For example, several leading researchers serve as consultants not only in the evaluation but also the cultivation and execution of research proposals.[28] The program also provides for expert critique of preliminary drafts of research papers to those grantees who desire such advice. The investigator is of course free to accept or reject such counsel

[28] These two functions are separated under the operating principle that no consultant can serve as judge of a proposal which he has helped to develop.

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as he wishes. Also, in the granting of funds, priority is given to younger scientists, including graduate students working on their dissertations.[29]

Proposals in Process. As an illustration of the kinds of research which the Program seeks to generate, I describe below two of the proposals we have funded to date which were judged to approximate the stated criteria.

Proposal I. Child rearing in home, family day care, and group day care. In this project the investigator, Moncrieff Cochran, takes advantage of a unique opportunity presented by contemporary Swedish society to investigate differences in socialization practices and outcomes as a function of three different child rearing settings. To control for motivation, home-reared children are selected from families desiring day care, but not receiving it because of shortage of places. Children in the two continuous day care settings (family and group) entered at six to nine months of age. A longitudinal design will follow all children to age five, including one mixed group raised at home for the first two or three years but then placed in a center for the remaining two or three. Hypotheses based on preliminary work already completed posit that greater adult-child interaction and limit-setting in the two home contexts versus greater peer interaction and control at centers will result in greater competence in the child's dealing with adults in the first instance, and with age-mates in the second. Analogous predictions are made for conformity to adult versus peer norms. Also, the child's tendency to resort to verbal mediation in peer conflict situations is anticipated to be greater for home-reared children. In general, youngsters raised in family day care are expected to fall in between home and group reared children, but to resemble the former more than the latter.

[29] More detailed information on criteria and procedures for submitting proposals may be obtained by writing to Joyce Brainard, Administrative Aide, FCD Program on the Ecology of Human Development, Department of Human Development and Family Studies, Cornell University, Ithaca, New York 14853.

Proposal II. Effects of parental involvement in teacher training. Working in poor residential areas in Mexico City, the investigator, Eduardo Almeida, offered an eight-week training course in child development, in one case for teachers alone, in another for teachers and parents together. In each region, one sixth-grade classroom was assigned to the experimental treatment (parents plus teacher) and another to the control group (teachers only). The weekly two-hour training sessions were conducted by persons who live and work in the immediate neighborhood. The general hypothesis of the study is that parental participation will result in enhanced motivation and learning on the part of pupils as a function of increased mutual understanding and convergent value commitments on the part of parents, teachers, and children.

Almeida has begun the analysis of his data, and some preliminary findings are available that are instructive both substantively and methodologically. The difference between the experimental and control group turned out to be significant on most outcome measures when tested against individuals within treatments, as is typically done in our journals. But none of the treatment effects were significant when tested against an appropriate error term based on differences between experimental and control classrooms within neighborhoods. This is so because the treatment was effective in some neighborhoods but not in others.

Pursuing this matter further, Almeida found reliable correlations between the child's gain score over the eight week period and various measures of social class (in particular parents' educational level and the presence in the home of such items as newspapers and encyclopedias). But the relationships were significantly stronger at the level of classrooms than of individuals. Specifically, a child's gain score was better predicted not by the socio-economic status of his own family but by the average social class level of the children in his classroom. In other words, what counted most was not his own background but the background of his classmates. Since, in Almeida's research, the classrooms

all come from different schools, they also reflected neighborhood differences. In checking on these differences, Almeida discovered that the schools exhibiting greatest gains were located in neighborhoods with well developed social networks, such that families were in some communication with each other. Moreover, under these circumstances, not only the experimental classrooms, but those in the control group showed improvement, presumably as a function of horizontal diffusion.[30]

Such findings illustrate a serious limitation of the conventional, non-ecological research design typically employed in experimental studies in our field. Usually the sample is drawn from a few classrooms (often only one) in one or two schools all in the same neighborhood, and all main effects and interactions are tested against an error term based on individuals. This means that any generalizations, though founded on statistically significant results, are in fact limited to the particular classrooms, schools or neighborhoods represented--unless one assumes that there are no reliable differences across these domains with respect to the variables being tested. In our own experimental and field studies,[31] all of which have been carried out cross-culturally, we have found this to be an unwarranted assumption. Differences among neighborhoods, schools, and even classrooms within schools are the rule rather than the exception. Therefore to establish the existence of experimental effects, of cultural con-

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[30] Gray, S.W. and Klaus, R.A. The early training project: The seventh-year report. Child Development, 1970, 41, 909-924.

[31] Bronfenbrenner, U. Response to pressure from peers vs. adults among Soviet and American school children. International Journal of Psychology, 1967, 2, 199-207; Bronfenbrenner, U. Two worlds of childhood: U.S. and U.S.S.R. New York: Russell Sage Foundation, 1970; Devereux, E.C., et al. Child-rearing in England and the United States: A cross-national comparison. Journal of Marriage and the Family, May 1969, 31, (2), 257-270; Devereux, E.C., et al. Socialization practices of parents, teachers, and peers in Israel: The kibbutz vs. the city. Child Development, 1974, 45, 269-281; Garbarino, J. & Bronfenbrenner, U. The socialization of moral judgment and behavior in cross-cultural perspective. In T. Lickona (Ed.), Morality: A handbook of moral development and behavior. New York: Holt, Rinehart, & Winston, in press; Shouval, R., et al. The anomalous reactions to social pressure of Israeli and Soviet children raised in family vs. collective settings, in press.

trasts, or even of such mundane phenomena as sex differences, it is necessary to show that the observed differences override variations at the classroom, school, or neighborhood level. Otherwise the generalization is limited to the particular contexts in which the research was carried out. This means, of course, that many of the findings reported in our research literature, including some of those most often cited, may actually be situation-specific.

Recognition of this fact poses serious difficulties for the design of ecologically valid experiments, for it means that the minimum N necessary for statistical generalizability is defined not by the number subjects, but by the number settings (e.g., classrooms, schools, neighborhoods) which these subjects represent. From this point of view, the most efficient design for social psychological studies, may be an analogue to the paradigm laid down by Brunswik for research on perception in his classic monograph "Perception and the representational design of psychological experiments";[32] that is, each subject would be selected from and thus be representative of a different setting (i.e., classroom, school, neighborhood) so that the sample reflects variation not only across individuals but over contexts as well, thus increasing the range of generalizability.

Some "Unproposed" Proposals. As additional examples of ecological experiments, I offer below a series of research problems and designs which have not yet appeared in proposals thus far received, but would be appropriate should they materialize.

Hypothetical Proposal I. The family as a two-person versus three-person system. It has been suggested that the involvement of a father in the care of the young child is important not only in terms of its direct impact on the infant, but

[32] Brunswik, E. Perception and the representational design of psychological experiments. Berkeley: University of California Press, 1956.

its indirect effect in providing support for the mother. An experiment designed to investigate this hypothesis centers around an educational program that could, if successful, be replicated on a broad scale. Young parents expecting their first child are invited to a series of free lectures and discussions on early child development to be given by a graduate student. There are two conditions: 1) both father and mother must be willing to attend; 2) only one of the two parents will be chosen. The selection is then done at random so that half of the "students" in the discussion series are wives, and the other half husbands. The ultimate foci of interest are the attitudes of the parents toward the infant both before and after it is born, and the care that each gives the baby during the early months of life. The intervening variables are patterns of interaction between husband and wife both before and after the child arrives. The general hypothesis of the study is that more positive attitudes toward the baby and toward the parenthood role, and more effective patterns of parent-child interaction will be manifested when it is the father rather than the mother who attends the lecture discussion series. The hypothesis rests on the assumption that the husband's involvement in the course will result not only in his more active participation in child care, but in his serving as a source of support to the mother, thus making the task of child care both easier and more motivating to both parents.

Hypothetical Proposal 2. Student volunteers as a support system for single-parent families. The stresses experienced by families in which the father is absent[33] and the growing number of such families in modern societies (For example,

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[33] Bronfenbrenner, 1970, op cit.; Robinson, H.B., et al., Early child care in the United States of America. Early Child Development and Care, 1973, 2, 350-581.

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in 1970, almost a quarter of all American children were living in single-parent homes, nearly double the rate for a decade before.), poses a need to understand and to alleviate these stresses. An experiment designed to achieve this two-fold objective involves the following elements. College students enrolled in courses in child development are asked to volunteer as aides to mothers who are single parents of a preschool child. There are two treatment groups. In one, the student offers to take care of the child in order to give the mother free time to do whatever she wishes. In the second, the student asks what chores he can do in order to relieve the mother, so that she can spend time with her son or daughter. In a control group, the student merely visits the home to provide resource materials in child development. Single-parent mothers desiring some form of assistance are assigned to one of the three groups at random. Outcome measures include the mother's attitudes toward the child and toward her role as parent, and patterns of mother-child interaction in the home. The general hypothesis of the study is that maternal attitudes and patterns of interaction will be more positive in the two experimental groups than in the control group, with higher levels achieved when the volunteer offers to relieve the mother of household chores, than when he takes over responsibilities for child care.

Hypothetical Proposal 3. The effect of neighborhood-age segregation on the status of children. The research design rests on the possibility of finding two neighborhoods of comparable socio-economic status but which differ in the presence in one of the neighborhoods of shops and small businesses in the residence area itself. The assumption is that an exposure to adults at work can reduce feelings of alienation experienced by children and youth living in the neighborhood. These feelings, in turn, are presumed to be reflected in such variables as differential drop-out rates, school failures, the later versus earlier development of career interests, self-esteem, and sense of self control over one's destiny.

Hypothetical Proposal 4. Enabling parents to be home when their children return from school. A growing problem in contemporary American society is posed by the increasing number of "latchkey children"--i.e., youngsters who come home from school to an empty house.[34] Such children are especially prone to academic difficulties, school absenteeism and drop-out, juvenile delinquency, and drug addiction. An experiment designed to illuminate and counteract such effects involves obtaining the cooperation of an enterprise employing a large number of workers to introduce, on an experimental basis, flexible work schedules which would enable parents who wish to do so to be at home when their children return from school. The time would be made up by working other hours. A control group would be offered similar flexibility in working schedules but not during the time when children come from school. Effects of this policy would be observed in the changing attitudes of parents toward their children and in the behavior of the latter, with particular reference to the deviant patterns described above.

Hypothetical Proposal 5. The impact of high-rise housing on socialization practice and effects. In case studies in journalistic reports, high-rise housing is often described as an unfavorable environment for raising children. The frequent presence of both high and low rise apartments in the same housing project presents an opportunity for investigating this issue with reference both to patterns of parent-child interaction and the behavior of the child outside the home in school and peer group. For the latter purpose, the dependent variables would be similar to those outlined in the preceding proposals.

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[34] Bronfenbrenner, U. Statement to the Subcommittee on Children and Youth of the United States Senate. Congressional Record, September 26, 1973, Volume 19, #142; Robinson, et al., op cit.

Hypothetical Proposal 6. Introducing children to the world of work. This experiment is based on policy and practice presently followed in the U.S.S.R. In that society, every unit of economic production, such as a shop, office, institute, or other workers collective, is encouraged to "adopt" as a civic responsibility some group of children such as a classroom, hospital ward, or preschool group. The workers visit the children wherever they are, and invite them to visit in return. They take the children on outings, get to know their teachers and their parents--in sum, the adults and children become friends. In the expectation that an American business could be interested in undertaking a similar program, it is proposed to gauge its impact on the children's attitudes and behavior along the lines indicated in preceding proposals.[35] A control group might consist of children who merely "tour" places of work without establishing friendly associations with the workers themselves.

Hypothetical Proposal 7. Family and individual development as a function of position in the social network. This research investigates the thesis that the existence, strength, and value focus of the informal social network play a critical part in enabling, or when weak or countervailing, in disabling the family to function in its childrearing role. The social networks would be mapped by interviewing both parents and, separately, their children to establish patterns of acquaintance, mutual activity, and assistance in time of need (for example, illness, emergencies, or perhaps simply advice on family problems). Attention would be focused on the extent to which resources for companionship or help are found within the immediate neighborhood, across or within boundaries of age,

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[35] At the author's suggestion a demonstration program of this kind was carried out at the Detroit Free Press by David Goslin of the Russell Sage Foundation (Goslin, 1971). The program is described in a documentary film entitled "A Place to Meet, A Way to Understand," which is available from the Federal government (The National Audio-Visual Center, Washington, D.C. 20409). Unfortunately, it was not possible to attach a research component to the project.

sex, occupation, and other social parameters. Of particular interest is the degree to which the social networks of parents and children intersect for different age groups.

There are two classes of dependent variables. The first concerns the attitudes and expectations of the parents toward themselves and their children. Assessment would be made of their sense of personal control not only over their own lives but also with respect to their child's development, their satisfaction with the parental role, with the behavior and progress of their children, and with their aspirations and realistic expectations for the child's future. The second class of dependent variables relates to the child himself, specifically, how well he functions in two contexts outside the home--the school, and his informal peer group.

The analysis will focus on determining whether parental orientations and child behaviors do vary systematically as a function of the informal social networks in which parent and child are embedded. But a research design of this kind, unfortunately, poses a problem in interpretation, for the causal process may actually operate in either or both of two opposite directions. Specifically, the social network may in this instance be not only a creator but a creature of family life--the product of characteristics of the family or of the child derived from other sources, perhaps even biological, but more likely social--such as family tradition, religious commitment, or patterns of life in the neighborhood in which the parents themselves had grown up.

This last possibility calls attention to an experiment of nature that permits some resolution of the issue of causal direction. It is this natural experiment that is exploited in our final example.

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Hypothetical Proposal 8. The developmental impact of moving to a new neighborhood. As suggested by the preliminary results of Almeida's project, the neighborhood may exert a profound influence on the child's psychological development. This phenomenon could be investigated in an "experiment of nature" by identifying children in a large city school system whose families will be moving in the following year to another neighborhood in the same city. In a two stage longitudinal research, interview and observational data could be obtained on the socio-economic, motivational, and behavioral characteristics of the target children and their classmates both in the original neighborhood and the new one with the aim of identifying the impact of particular features of the neighborhood that instigate behavioral change. Although each child serves as his own control, comparative data would also be obtained on children who continue to live in or newly move into the original neighborhood, as well as those who have been living for some years in the new one.[36]

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[36]The idea for this research was suggested by the author's reanalysis (Bronfenbrenner, U. Nature with nurture: A reinterpretation of the evidence. In A. Montagu (Ed.), Race and IQ. New York: Oxford University Press, in press) of data from published studies of identical twins reared apart cited by Jensen (Jensen, A.R. How much can we boost I.Q. and scholastic achievement? Harvard Educational Review, Winter, 1969, 1-123) in support of his claim that 80% of intelligence is genetically determined. To arrive at the 80% figure, Jensen made the assumption that the separated twins grew up in "uncorrelated environments" (p. 50). To test the validity of this assumption, the present author analyzed statistical and case study data provided in the original twin reports. Among other findings were the following:

a. Among 35 pairs of separated twins for whom information was available about the community in which they lived, the correlation in Binet IQ for those raised in the same town was .83; for those brought up in different towns, the figure was .67.
b. In another sample of 38 separated twins, tested with a combination of verbal and non-verbal intelligence scales, the correlation for those attending the same school in the same town was .87; for those attending schools in different towns, the coefficient was .66.
c. When the communities in the preceding sample were classified as similar vs. dissimilar on the basis of size and economic base (e.g., mining vs. agricultural), the correlation for separated twins living in similar communities was .86; for those residing in dissimilar localities the coefficient was .26.

All of the foregoing proposals, both actual and hypothetical, are of course presented in incomplete form. The purpose is not to describe the design in its entirety, but only to illustrate how the general ecological model outlined in the main body of this paper can be implemented in concrete scientific experiments. Also, I wish to make clear that the facts and ideas which I have presented here are, in substantial measure, based on the work of others. What I have done is to bring together data and thought that is dispersed over time and topic in the published literature of the past few years. It has been my purpose to identify these scattered elements, consolidate them, and consider their implications for the direction and design of future research in human development.

In conclusion, I offer a caveat no less to myself than to my colleagues. Those of us who are now active and experienced researchers were of course trained and socialized to use and value the research models and methods that now prevail in our field. If our theories of socialization are valid, however, it should be rather difficult for us to break out of our established modes of scientific thought and action. Try as we may, we are likely to regress to the kinds of formulations and analyses with which we are most familiar. This means that, if the ecological approach is indeed a promising one for our science, the major breakthroughs, both theoretical and empirical, will be accomplished not by the present cohort of established scientists, but by the younger generation of researchers just coming on the scene. It is for this reason that the grant program which I described gives priority to younger investigators. Our function is to give them support, and such wisdom as we have. I invite you to join me in that effort.

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